Lectures
ON THE
PHYSIOLOGICAL PATHOLOGY OF THE BRAIN.

Delivered at the Royal College of Physicians of London, July, 1876,

BY C. E. BROWN-SÉQUARD,
M.D., F.R.S., F.R.C.P. LOND., ETC.

LECTURE III.—PART II.

ON GLOSSOPLEGIA AS AN EFFECT OF DISEASE OF THE BRAIN.

Hemiglossoplegia may exist without paralysis of limbs, and it may be on the side of the brain lesion or on the other side—The same lesion may at the same time produce a facial paralysis on one side and hemiglossoplegia on the other—Hemiglossoplegia, in cases of lesions of similar parts on the two sides of the brain, may appear on the side where the alteration is greatest—A lesion in any of the lobes of the left hemisphere can produce a loss of the power of protruding the tongue—The same effect may also be due to lesions in the cerebral ganglia and the pons Varolii on the left side—A lesion in either one of many distinct parts of the right half of the brain has also sometimes destroyed the power of protruding the tongue—The inability to protrude the tongue can be caused by lesions producing no aphasia, nor even any difficulty of speech—The inability to protrude the tongue is sometimes due to a spasmodic retraction of that organ, and sometimes probably to a peculiar alteration of the will—Ataxy of the tongue—In some cases the inability to protrude the tongue is due to a real and ordinary paralysis of some muscles—The tongue, like the arms, the legs, and the face, may be paralysed on the two sides from a one-sided lesion—A lesion in one half of the pons Varolii can produce paralysis in the two sides of the tongue, or in one side only, which may be the corresponding one as well as the other—A central lesion of the pons Varolii may cause hemiglossoplegia—Decisive evidence against the supposed existence of a centre for the movements of the tongue in the third frontal convolution—General conclusions.

BEFORE coming to a general discussion of the significance of the facts I have stated about the tongue I have to examine a few more propositions, and I begin with the following.

4th. *Hemiglossoplegia without paralysis of limbs may be caused by lesions located in different parts of the brain, and it may appear either on the side of the cerebral alteration or on the opposite side.*—The facts are not numerous on which I can ground this proposition, but they are decisive. The organic alteration in one case[1] was in the third frontal convolution; in another case[2] it was more extensive, and occupied a large place between the corpus striatum, the island of Reil, and the neighbouring tissue; in a third case[3] it was in the middle lobe, extending from the surface to the lateral ventricle. In the first of these cases, as you see, the lesion (a softening) was in the anterior lobe; in the second (a large hydatid cyst) it was chiefly in the central lobe and part of the corpus striatum; and in the third (an abscess) it was in the middle lobe. In these three cases the limbs were not paralysed, but there was with the hemiglossoplegia a facial paralysis. In the three cases the lesion was in the left side of the brain; but while in two the paralysis of the tongue was on the right side, in one (the third) it was on the left side, and with this remarkable feature, that the facial paralysis was on the right side; so that, of the two local paralyses, that of the tongue was on one side, while that of the face was on the other. This last case is therefore especially valuable against the admitted views about paralysis, as, besides what was observed about the tongue, there was no paralysis of limbs, although there was a large abscess extending from the dura mater down to the ventricle in the left middle lobe. I now pass to another proposition.

5th. *Hemiglossoplegia in cases of lesions in similar parts of the brain on the two sides may appear on the side where the alteration is greatest.*—There are a number of cases on record which I might relate to establish this proposition, but as, on the one hand, I have shown already that the tongue is often paralysed on the side of a cerebral lesion, and as, on the other hand, I shall have to show by and by that a lesion can exist anywhere in the brain (except where are the nuclei, or the roots of the hypoglossus nerve, in the medulla oblongata) without producing glossoplegia, it is not necessary to give more than a few cases in support of that proposition. It is clear that if we admit that in such cases the one-sided lingual paralysis is due to one only of the two lesions, the other must be without a paralysing influence, and if we admit that it is the side most extensively altered which causes the paralysis, then it is evident that the hemiglossoplegia is due to a lesion on the very side in which it exists. In a case of Porral's,[4] the tongue on protrusion turned to the *right*, while there was paralysis of the four limbs. In the right middle lobe there was a vast hæmorrhagic cavity opening into the lateral ventricles, the wall between which was torn. There was therefore pretty much the same lesion in the two ventricles, but the middle lobe on the side of the glossoplegia had a considerable laceration, while there was no such lesion in that lobe on the opposite side. In a carefully reported case of Dr. Bourneville's similar lesions in similar parts existed on the two sides (softening from embolism of the anterior and middle cerebral arteries), but were much greater, and had lasted longer in the *right* hemisphere.[5] There was paresis of the *right* limbs, and deviation of the tongue to the *right*. In the important case of Dr. Eade's,[6] which I have often quoted, the two corpora striata were diseased, the left very much more than the right, and the tongue protruded to the left, the hemiglossoplegia, as well as the paralysis of the limbs, existing on the side of the greatest lesion in the brain. These facts certainly give sufficient ground for the above proposition, so that I will at once pass on to another.

6th. *A loss of power of protruding the tongue can be produced by lesions located in almost any part of the brain, either on the right or on the left side.*—When we find a lesion in only one side of the brain in cases of loss of action of muscles on both sides of the body, it is a question of vital importance, in its bearing upon the admitted theories of paralysis and of the physiological relations between the brain and muscles, to examine if that loss of action constitutes or not a genuine paralysis. In the two preceding lectures I have tried to show that a real double-sided paralysis can arise from a lesion in one half of the brain. I have related a great many facts which, to say the least, seem to prove that paralysis of either the upper or lower limbs, or of three or four limbs, or of the two sides of the face, can be produced by a lesion in one half of the brain. Is the tongue like the muscles of the limbs and face in that respect, and can we look upon cases of inability of protruding that organ as a proof of the existence of a genuine paralysis of muscular bundles belonging to the two sides, when there is only a one-sided cerebral lesion? Before answering these questions I will give a brief account of a number of cases in which the appearance of such a paralysis has existed, and in which, at the time of the examination of the tongue, the patients had complete consciousness, and no evident alteration of intelligence.

There are many cases on record in which the loss of the power of protruding the tongue existed with very extensive lesions of the left side of the brain. I will give a short indication of only a few such cases. That symptom existed in a case in which Descroizilles[7] found that there were two abscesses, one in the anterior lobe, the other in the posterior lobe, on the left side. It also existed in a case in which Broussais[8] found that the left hemisphere contained several abscesses and was atrophied. It also existed in a case in

[1] Hervey, in Bulletins de la Société Anatomique de Paris, 1874, p. 29.
[2] Bristowe, in Transactions of the Pathological Society of London, vol. xxiv., p. 9.
[3] Seguin, in Quarterly Journal of Psychological Medicine (New York), Jan. 1868, p. 113.
[4] Thèse de Paris, 1830, No. 286, p. 7; quoted by Gintrac, loc. cit., vol. viii., p. 78.
[5] Comptes Rendus de la Société de Biologie (Paris, 1867), p. 10.
[6] THE LANCET, vol. ii. 1857, p. 134.
[7] Bulletins de la Société Anatomique de Paris, vol. xxxiv. (1859), p. 50.
[8] In [Lallemand, loc. cit., vol. ii., p. 46; and in Bouillaud, loc. cit., p. 125.

which Duplay[9] found a purulent infiltration, with softening of the left anterior lobe and part of the middle lobe. It existed also in a case in which Professor M. H. Romberg[10] found the left corpus striatum destroyed, and the left anterior lobe and part of the middle one softened.

In the following cases the lesion was less extensive than in the preceding ones. In a case in which the power of articulation was almost completely lost, Andral[11] found that the tongue could not be put out. There was a clot the size of a hen's egg in the left anterior lobe. Archambault[12] gives a case of aphasia, in which the tongue, although mobile in the mouth, could not be thrust out of it. The left third and a few neighbouring convolutions were altered. In a case of Poumeau's,[13] not only the tongue was not protruded, but it could not execute any other movement except in the act of swallowing. Speech was lost. The lesion (softening) was in the medullary substance on the side of the left corpus striatum. Andral[14] gives a case of hæmorrhage of the left middle lobe outside and above the corpus striatum and of the thalamus, having caused a loss of speech and voice, with impossibility of protruding the tongue. In a case of genuine aphasia *(notwithstanding the normal state of the third frontal convolution and of the island of Reil)* due to softening of the left occipital lobe and part of the sphenoidal lobe, Troisier[15] found that the tongue could not be protruded. My lamented friend, Professor J. Hughes Bennett,[16] has observed that symptom in a case of hæmorrhage of the left optic thalamus. In a case of Lerminier's,[17] there was loss of speech with impossibility of protruding the tongue, while the movements of the limbs were free. The anterior part of the left ventricle was greatly dilated, and there was a small cyst in the left corpus striatum. Inability to protrude the tongue coexisted with paralysis of both arms in a case of patches of capillary apoplexy on the surface of the left hemisphere, especially the posterior lobe.[18] In a very interesting case of Coindet's,[19] there was inability of protruding the tongue, with stammering. A tumour the size of a bean was found on the left side of the pons Varolii, the neighbouring tissue being softened.

The above cases are certainly sufficient to show that *a lesion in the left half of the brain, whether in the anterior, the middle, or the posterior lobe, in the convolutions or in the medullary substance, in the corpus striatum, the optic thalamus, or the pons Varolii, can produce a loss of power of protrusion of the tongue.* Before discussing the meaning of these facts, I will show that the right side of the brain can, like the left, produce that peculiar loss of power. For the sake of brevity I will only give the name of the observer, the seat and the kind of the lesion, without repeating that it was on the right side and that the tongue could not be protruded. Ducrot,[20] inflammation of the internal and anterior part of the hemisphere; Thouret,[21] softening of the centrum ovale, corpus striatum, and optic thalamus; Gendrin,[22] two cases, one of an hæmorrhagic effusion extending from the optic thalamus, through the crus cerebri, into the pons Varolii, and the other of inflammation of a part of the base of the anterior lobe, near the middle lobe; Bouillaud,[23] considerable hæmorrhage in the posterior and middle lobes, without marked lesion of the corpus striatum or optic thalamus. These cases show that *a lesion in either one of many distinct parts of the right half of the brain has been able to produce a loss of the power of protruding the tongue.*

In presence of these two series of facts showing that a lesion in either the right or the left half of the brain can produce an appearance of paralysis of the two genio-glossi (and perhaps also of the two mylo-hyoid and the two genio-hyoid muscles), it is important to examine if that appearance is a deceptive one or a reality. I will say, first, that it is impossible to look upon at least some of the facts I have mentioned as belonging to the peculiar class of loss of movement of the tongue which is allied with aphasia. Not only was there no alteration at all of speech (and of course no aphasia) in several of these cases, such as the two of Gendrin's (note 22), that of Ducrot's (note 20), and that of Copeman's (note 18), but in a number of others instead of aphasia there was a loss of articulation, or, as in the curious case of Coindet's (note 19), only stammering. In one half at least of the cases I have mentioned, and in more than one half of the cases I have seen, of want of power to protrude the tongue, in connexion with hemiplegia from a one-sided brain disease, there was no aphasia. There are, therefore, two kinds of that inability to be explained, one coexisting with aphasia and another independent of it.

As regards the first of these two kinds, I will briefly examine the various explanations that can be given of that inability. In a number of cases, and especially in an aphasic patient whom I saw in July last with Dr. Carmichael of Liverpool, I found that when an effort was made to show the tongue, it was drawn back spasmodically, instead of being thrust or pushed out. Sometimes, besides this backward movement of the tongue, there are also other spasmodic contractions (as I have seen several times, and especially in one case in Dublin, in consultation with my friend Dr. R. McDonnell). Many muscles of the face and neck, and particularly those of the lips and cheeks, are seized with spasm when the patient tries to show his tongue or to speak. In a curious case of cerebral hæmorrhage, with loss of speech, Leroux[24] could not see the tongue, which formed a notable swelling on the upper part of the left side of the neck. "It soon reappeared, trembling." There was an effusion of two ounces of blood in the left middle lobe.

But it is impossible to explain by a spasmodic contraction of the retractor muscles of the tongue all the cases of inability to protrude it in cases of aphasia. I have seen a number of such cases without the least appearance of spasmodic action either of the tongue or of muscles of the face or jaw. My ingenious friend Dr. J. Hughlings Jackson[25] believes that the inability of protruding the tongue depends on a lack of will power. He denies that there is then a real or an ordinary paralysis, as the tongue can be moved in every direction in the acts of eating and swallowing. This proof is not decisive, because the movements of the tongue in these acts depend almost entirely on other muscles than those which appear to be paralysed. In a number of the cases in which the power of fully protruding the tongue is lost, we find that that organ can be pushed forward and appear between the teeth, or even between the lips. There is, then, more than enough action of the protruding muscles for their small share in the movements of the tongue in the act of eating. Still, it is possible that in some cases of aphasia the power of protruding the tongue may be lost by some cause allied with that of the loss of speech. It was probably so in a case of ataxy of the tongue, in which it could not be pushed beyond the lips, and, when there, was drawn suddenly and involuntarily back into the mouth. Aphasia existed, but with perfect articulation of some words. There was considerable lesion of the anterior lobe and of part of the middle on the right side.[26] The reverse sometimes takes place. After some hesitation it may happen that the tongue will suddenly be thrown out with violence. In other cases of aphasia, or loss of speech, the tongue, after having been put out straight and well, is forgotten there; so it was in a case of hæmorrhage in several parts of the right hemisphere (Gintrac[27]), and in one of considerable softening of the two posterior lobes (Bateman[28]). There is some ground, therefore, for believing that sometimes there is a morbid state of the will power as the cause of the inability to protrude the tongue. But it is evident that in many cases in which there is no aphasia and no trace of disorder of the mental powers,

[9] Journal Hebdomad. des Progrès des Sciences Médicales, vol. iii. (1863), p. 194.
[10] A Manual of Nervous Diseases of Man, translated by Dr. E. H. Sieveking (London, 1853), vol. ii., p. 429.
[11] Clinique Médicale, 4ème edit. (Paris, 1840), vol. v., p. 300.
[12] Annales Médico-psychologiques (Paris, 1867), vol. ix., p. 493.
[13] Du Rôle de l'Inflammation dans le Ramollissement Cérébral (Paris, 1866), p. 88.
[14] Loc. cit., vol. v., p. 309, observation vi.
[15] Comptes Rendus de la Société de Biologie (Paris, 1873), p. 338, and 1874, p. 1.
[16] Clinical Lectures on the Principles of Medicine (Edinburgh, 1867), p. 411.
[17] Annuaire Médico-Chirurgical (Paris, 1819), p. 218.
[18] A Collection of Cases of Apoplexy, by E. Copeman (London, 1845), p. 57.
[19] Mémoire sur l'Hydrocéphalie, p. 98; and in Lallemand, loc. cit., vol. iii., p. 52.
[20] Essai sur la Céphalite (Paris, 1812), obs. 2; in Bouillaud, Traite de l'Encéphalite (Paris, 1825), p. 7.
[21] Journal Hebdomadaire (Paris, 1828), vol. i., p. 439.
[22] In Bibliothèque du Médecin-Praticien, du Dr. Fabre, vol. ix., 1849, pp. 61 and 142.
[23] Loc. cit., p. 221.
[24] Cours sur les Généralités de la Médecine Pratique (Paris, 1836), vol. vii., p. 144.
[25] Clinical Lectures and Reports, by the staff of the London Hospital, vol. i., p. 400, and vol. ii, p. 307.
[26] Copeman, Collection of Cases of Apoplexy (London, 1845), p. 36.
[27] Loc. cit., vol. vii., p. 242.
[28] On Aphasia, or Loss of Speech (London, 1870), pp. 66 and 158.

that inability must be considered as an ordinary paralysis. The following summary of facts gives good ground for this explanation of the cases in which that inability is not due to a spasmodic retraction :—

1. The want of power of protruding the tongue may coexist with aphasia, but it may also appear without that peculiar loss of speech.[29]

2. That inability may be associated with difficulties of articulation, but it may also exist when there is no deficiency of speech of any kind.

3. That inability may arise from disease of the right side of the brain, although less frequently than from disease of the left side.

4. That inability may exist with or without a paralysis of the face or limbs. There was no paralysis for a time elsewhere than in the tongue in cases of Lerminier's (note 11), and of Ducrot's (note 20).

5. That inability may be caused by a lesion of any kind, and located in almost any part of the brain.

These facts seem to show conclusively that, at least in a number of cases, *the lack of power of protruding the tongue is due to a real paralysis of the protruding muscles of that organ.* In the cases I have mentioned this double-sided paralysis was caused by a lesion in one side of the brain. This is an instance which is to be added to many others given in the two preceding lectures of the production, by a one-sided cerebral lesion, of a paralysis in the two sides of the body. I need scarcely remark how contrary this is to all that is admitted as regards the mode of production of paralysis and the supposed relations of muscles on one side of the body with the brain on the other side. I pass now to another proposition.

7th. *A lesion in the pons Varolii may produce a variety of paralysing effects on the tongue in absolute contradiction with admitted views.*—According to the received theories, the supposed psycho-motor centre for the movements of one side of the tongue is on the opposite side of the brain, and the fibres which connect that centre with the nucleus of the hypoglossus nerve pass in the so-called motor tract of the crus cerebri, pons Varolii, and medulla oblongata, and in this last part the fibres of one side decussate with those of the other side. As regards the rather obscure anatomical ground for such a decussation, I will refer to the statements made by Meynet.[30] Facts in large numbers disagree with those views. I have already related many, and I will now only mention hastily some in which the lesion was located in the pons Varolii.

1. Many cases exist in which there was no glossal paralysis, although a lesion of a destructive kind occupied the so-called motor tract of the pons Varolii, and parts behind it, in one or in two sides. In another part of this lecture I will give a number of these facts.

2. A lesion in one side of the pons Varolii can produce hemiglossoplegia, either on the corresponding or on the opposite side. It would be useless to show that such a lesion can produce paralysis on the opposite side, as that is in harmony with the admitted views. As regards paralysis of the tongue on the side of a lesion in the pons, I have already mentioned a number of such cases, recorded by Berger, Mr. F. Mason, Dr. Broadbent, Denonvilliers, and others, so that I will only now give the principal features of a clinical fact recorded by Dr. Josias.[31] In this case there was, after an attack of apoplexy, paralysis of the left limbs, with protrusion of the tongue to the right. A well-defined hæmorrhagic cavity the size of a filbert was found in the anterior and middle parts of the right half of the pons, not reaching either the medulla oblongata or the tubercula quadrigemina. It is clear that in this case the nucleus of the hypoglossus had not been mechanically interfered with. So it was in a number of more or less similar cases. Indeed a lesion, even in cases of hæmorrhage or tumour, must be in or upon the limited part of the medulla oblongata where the nucleus or the nuclei of the hypoglossus and the roots of that nerve are located, to cause its paralysis, as we find that there are cases of disease of the pons Varolii very low down, and of the medulla oblongata itself—on one side,—producing hemiglossoplegia on the opposite side.

3. A lesion in one side of the pons Varolii can produce a double-sided paralysis of the protruding muscles of the tongue, and sometimes of other muscles of that organ. In a case of Bretonneau's,[32] there was a cessation of movement of the tongue, with loss of speech, but persistence of intelligence. There was no other alteration except a small spot in the right half of the pons Varolii. In the case of Coindet's, already mentioned (see note 19), a small tumour on one side of the pons Varolii caused a paralysis of the protruding muscles of the tongue on the two sides. Even a lesion of a part of one half of the medulla oblongata can paralyse muscles of the tongue on the two sides.[33]

4. A central lesion in the pons Varolii can produce a hemiglossoplegia. This is supported by very few facts; among which the following, however, is so clear that there is no need of other proofs. In that case, carefully recorded by Gintrac,[34] the tongue deviated to the left, and the lesion occupied the centre of the pons Varolii, especially in the anterior and upper part of that organ.

It is clear therefore (1st) *that a lesion in one side of the pons Varolii can produce a paralysis either in the two sides of the tongue or in one only;* (2nd) *that the hemiglossoplegia due to a unilateral lesion of the pons Varolii may be on the corresponding or on the opposite side;* (3rd) *that a central lesion of the pons Varolii may cause hemiglossoplegia.* These conclusions acquire a greater force from the fact I will hereafter establish on positive evidence, that a destructive lesion of the motor parts of the pons Varolii on one or both sides can exist without glossoplegia.[35]

These last conclusions, as well as those I have previously drawn from many facts relating to glossoplegia, are powerful arguments against the generally admitted views on the physiology of voluntary movements and on the mechanism of production of paralysis. In presence of such arguments it is not possible to continue to admit that there is in each cerebral hemisphere a cluster of nerve-cells, constituting a psycho-motor centre of the tongue. This is not more possible whether we believe that the will-centre for the movement of that organ is in the cornu Ammonis, as supposed first by Foville[36] and long after by Dr. Charles Elam,[37] or that it is in the third and the foot of the ascending frontal convolutions, according to Dr. D. Ferrier.[38] Against the first of these suppositions it is enough to say that lesions in all parts of the brain, even very far from the cornu Ammonis, can produce glossoplegia. I will by and by add to that argument a no less decisive one, consisting in showing that that part of the brain can be destroyed without any diminution in the movements of the tongue. As regards the third frontal convolution, there are a few facts which are completely or partly in harmony with it (see above: Hervey, note 1; Archambault, note 12), but there are, on the contrary, an immense number of facts quite in opposition to it. Amongst these facts I will, later on, relate a good many showing that the tongue was not paralysed in cases in which the frontal convolutions on the two sides were destroyed. As regards cases of glossoplegia due to disease in various parts of the brain, most of those mentioned in this lecture are quite antagonistic to the views of Ferrier and other localisers. I will only call attention first to the cases of hemiglossoplegia caused by a lesion on the same side, and secondly to cases showing that a lesion in the middle, the posterior, as well as in the anterior lobes, can produce paralysis of the tongue. If I only examine what has been ascertained in cases of disease of the convolutions, I find that in such cases glossoplegia is rare, but that it has occurred more frequently in cases of disease of the surface of the middle lobe than of that of the frontal lobe. I find also that a lesion of the cortical substance of the posterior lobe can produce glossoplegia. Be-

[29] This is especially shown in a case in which Chapotin de St. Laurent found first a complete paralysis of the tongue, then an inability of protruding it, although speech existed, and later on that the tongue was protruded, but speech was extremely difficult, showing most clearly the lack of relation between speech and protrusion of the tongue (Bulletins de la Société Anatomique, 1843, vol. xviii., p. 157).

[30] Manual of Human and Comparat. Histology, edited by Stricker, (New Sydenham Society; London 1872), vol. ii., p. 511.

[31] Thèses de Paris, No. 162, 1851, p. 19; quoted by Gintrac, loc. cit., vol. vii., p. 336.

[32] Quoted by Velpeau, Revue Médicale (Paris, 1826), vol. ii., p. 265; and by Gintrac, loc. cit., vol. viii., p. 369.

[33] See the interesting cases of Dr. James Johnson (Medico-Chirurgical Review, London, July, 1836, No. 49, p. 156), and of Drs. Hughlings Jackson and Lockhart Clarke (THE LANCET, Nov. 30th, 1872).

[34] Loc. cit., vol. viii., pp. 369, 370.

[35] The tongue "continued to move perfectly in every direction" in a case in which there was a large tumour in the right half of the pons Varolii, which was twice its normal size, and projected beyond the anterior margin of the left half by an inch. (M. H. Romberg: A Manual of Nervous Diseases, translated by Dr. Sieveking, London, 1853, vol. ii., p. 407). I will quote by and by similar cases of Vaussin, Carré, E. Stanley, Christian, and others.

[36] Dictionnaire de Médecine et de Chirurgie Pratiques, en 15 vols. Article Encéphale, vol. vii., p. 218.

[37] On Cerebria and other Diseases of the Brain (London, 1872), p. 96.

[38] The Functions of the Brain (London, 1876), pp. 143, 272, and 307.

sides, there are fewer cases of paralysis of the tongue on the opposite side to that of the lesion of the cerebral convolutions than on the same side. Amongst these last cases is one of Dreyfus', already quoted, in which the lesion occupied the very place where it ought to be according to the theory, but unfortunately it was on the wrong side. It was on the *right* side, and the tongue deviated to the *right*, while it ought to have turned to the *left*.

There is no part of the brain above the medulla oblongata which can be considered as a centre for the protruding movements of the tongue. The view that paralysis in brain disease is due to a loss of action of either nerve-cells or nerve-fibres endowed with the function of producing voluntary movements in the muscles that become paralysed is in complete disagreement, as regards paralysis of the tongue as well as it is about paralysis of limbs or of the face, with most of the facts I have mentioned. This is shown, especially as regards the tongue, by the following sets of cases:—1st, all the clinical facts in which hemiglossoplegia has existed on the side of the cerebral lesion, or on the side of the greatest lesion where there was disease in the two sides of the brain, are in absolute opposition to the admitted views, according to which every kind of paralysis from disease in one half of the brain ought to be in the opposite side to that of the lesion; 2nd, the production of glossoplegia by a lesion in any part of the brain is also in clear opposition with the admitted theories, according to which the few nerve-fibres coming from the supposed centre in the convolutions ought to be in a very small part of the corona radiata. We certainly cannot admit that the centre and the nerve-fibres employed in moving the tongue are in one individual in the anterior, in another in the middle, and in a third in the posterior lobe of the brain.

I pass now to a short summary of facts, and to some of the conclusions they lead to. I hope to have shown:

1st. That the tongue may be paralysed on the side of the only lesion found in one or several of the various parts of the brain, far away from the medulla oblongata.

2nd. That such a direct hemiglossoplegia may be on the side of the paralysis of limbs or on the opposite side, or without paralysis of any other part except the face.

3rd. A hemiglossoplegia, whether on the side of the brain lesion or on the opposite side, may be caused by a small or an extensive lesion located in almost any part of the cerebral lobes or the base of the brain.

4th. A hemiglossoplegia may arise from a lesion occupying similar parts in the two sides of the brain, and it may then be that the lesion is more extensive on the side of that lingual paralysis.

5th. The loss of the power of protruding the tongue in aphasia is sometimes due to a convulsive retraction of that organ when the patient makes an effort to put it out of the mouth. That inability to push out the tongue may also be due to some ataxical disorder, or result from a general paralysis of the protruding muscles of the tongue.

6th. The inability of protruding the tongue due to brain disease may exist without aphasia, and even without any difficulty of speech, resulting then from a real paralysis of the tongue.

7th. The protruding muscles of the tongue on the two sides may be paralysed from a lesion in only one side of the brain.

8th. The localisation of a psycho-motor centre for the movements of the tongue in certain frontal convolutions is in absolute contradiction with a large number of decisive facts.

9th. The explanations of the appearance of paralysis of the only muscle of the tongue (the genio-glossus) usually weakened in cases of brain disease, consisting in looking upon the lesion as having destroyed or altered nerve-cells or nerve-fibres endowed with the function of producing voluntary movements of that muscle, are in absolute contradiction with a very large number of decisive facts.

BEQUESTS, &C., TO MEDICAL CHARITIES.—Dr. James Blundell, of Piccadilly, bequeathed £500 to the London Hospital, and £250 to St. Mary's Hospital. The Brighton Hospital for Sick Children has received £500 under the will of Mrs. Gibson, and £100 under that of Miss E. C. Smith. Mrs. Whitworth, of Dallington Hall, has given £500 to the honorary fund of the Royal Victoria Dispensary, Northampton. The Misses Brooke have given £200 to the National Orthopædic Hospital of Ireland, and £100 to the National Institution for the Blind of Ireland.

MEMBRANOUS LARYNGITIS, OR CROUP, AS A RESULT OF A "DEFINITE EXPOSURE TO COLD."

BY GEORGE JOHNSON, M.D., F.R.S.,
PROFESSOR OF CLINICAL MEDICINE, SENIOR PHYSICIAN TO KING'S COLLEGE HOSPITAL.

IN THE LANCET of Jan. 26th (p. 141) there appears the following announcement:—"The Secretary of the Sub-committee of the Royal Medical and Chirurgical Society on the relations of Diphtheria and Croup desires us to state that the Committee are anxious to obtain the notes of any case in which the formation of false membrane in the air-passages has succeeded upon a definite exposure to cold, and will be greatly indebted to any gentleman who will favour them with such information. They would also be glad of a specimen of the larynx and trachea, or of expectorated false membrane, from such a case, &c." Now, upon this communication I venture to make some comments and suggestions. Of course the object which the Committee have in view is to ascertain whether there is a form of membranous laryngitis which is not diphtheritic, but it is very doubtful whether this important question can be decided by collecting cases in which "a false membrane in the air-passages has succeeded upon a definite exposure to cold." That membranous laryngitis may follow and apparently be excited by exposure to cold is, I believe, unquestionable, but, according to my experience, a careful inquiry into the history of such cases elicits the fact that in addition to the exposure to cold there has been either infection from a diphtheritic patient, or the sufferer from catarrhal laryngitis has also been poisoned by foul air or contaminated water.

It is notorious that an inflamed mucous membrane or an abraded skin is very liable to become inoculated by the diphtheritic poison. Hence it happens that the throat of a sufferer from measles or scarlet fever, or simple tonsillitis or catarrhal laryngitis, is often infected by the diphtheritic poison, with resulting membranous exudation. So in like manner, where the skin has been abraded by a blister, or wounded by a leech or by the knife of the surgeon, there may be an inoculation with the morbid poison which gives rise to the diphtheritic exudation. These facts, I repeat, are notorious; but will they be borne in mind as they should be by those who are in search of cases of membranous exudation in the air-passages following exposure to cold? I venture to suggest that the Committee, in asking for histories of such cases, would have done well to point out the necessity for great care and watchfulness to discover the existence of any morbid influence other than exposure to cold which may have co-operated in any given case. I may illustrate the importance of this by a brief reference to two cases which have recently come under my own observation.

A delicate youth, who had often suffered from catarrhal tonsillitis, had lately an attack of his old malady. The inflammation, pain, and swelling were less severe than they had been on several former occasions, but there was now the new feature of a distinct, though soft, membranous exudation on the surface of each tonsil. The disease did not extend to the air-passages, and it soon yielded to treatment. The question arose, what was the pathology of the exudation on the tonsil? Was it a result solely of catarrhal inflammation excited by exposure to cold? The house was on high ground near Henley, and no expense had been spared by its wealthy and most intelligent owner to render it not only beautiful and comfortable, but wholesome. There was no reason to suppose that the patient had come in contact with any sufferer from diphtheria. I therefore expressed to the father my conviction that sewer poison was the cause of the peculiar condition of throat. And I heard subsequently that a very offensive smell had repeatedly emanated from one closet at the foot of a staircase, and, later still, that it had been found that, in consequence of some defect in the ventilation of the drains, sewer gas escaped into every closet when the water was rushing down. Here then, I take it, was the explanation of the membranous exudation, which in this case had "followed a definite exposure to cold."

The second case was that of a healthy infant, whose foreskin had to be partially removed in consequence of con-

genital phimosis. The wound, made by an eminent surgeon, did not heal, and in a few days it was covered by a diphtheritic membrane. The child was the son of a wealthy man, whose spacious house stands on the eastern border of Hyde-park. The two gentlemen in attendance upon the child, feeling sure that the unhealthy condition of the wound was the result of some insanitary surroundings, removed the patient to another house, where I met them in consultation, and where the wound soon assumed a healthy appearance and healed. With some difficulty I persuaded the father to have his house thoroughly inspected, when grave sanitary defects were discovered and corrected. Now, if this child, instead of undergoing a surgical operation, had been exposed to cold, and had thus got a catarrhal inflammation of the larynx, he would very probably have had a membranous exudation on the inflamed mucous surface, and the case might have been reported as one in which "the formation of false membrane in the air-passages had succeeded upon a definite exposure to cold."

It is only with reference to cases occurring in private practice, and especially amongst the middle and upper classes, that the inquiries which are requisite in order to throw light upon the etiology of these diseases can be thoroughly carried out. Cases occurring in hospital practice are, for the most part, quite unsuitable for this purpose, and it is a mistake to suppose that any trustworthy inference can be drawn from a large number of imperfectly observed and recorded cases.

In the last volume of the Guy's Hospital Reports there is a "Collection of Cases of Diphtheria and Croup," communicated by Dr. Hilton Fagge. In that paper, in the section headed "Cases of membranous pharyngitis or laryngitis due to local injury of the throat," I find, amongst other cases, one (Case 91) of a child who, having "swallowed a piece of hot potato, which lodged in his throat for some time," was found after death not only to have flakes of lymph on his tongue and tonsils, but the interior of the larynx and "the whole trachea were more or less lined with lymph." Now, surely it is inconceivable that this exudation in the air-passages was a result solely of a piece of hot potato in the gullet. In the history of this case it is said "there is no diphtheria in the neighbourhood," but nothing is stated, probably nothing was known, by the reporter with regard to the sanitary or insanitary condition of the patient's dwelling. In another case (93) of scald of the throat "a membrane was found on the pharynx and larynx, and down as far as the minute branches of the bronchial tubes"; and in a third case (94) of cut-throat there was "plastic lymph in pharynx and larynx, traceable into the smallest bronchial tubes." Surely these cases prove too much to warrant their being designated "cases of membranous pharyngitis or laryngitis, due to local injury of the throat." They prove that a membranous exudation spreading into the air-passages far beyond the seat of injury must have been due, not to the mere local injury, but to a diffusible, specific, infecting poison, the source of which might probably have been discovered by a careful investigation of the patient's surroundings before and after the receipt of the injury.

The result of my own investigations has been the conclusion that, in the absence of direct contagion, the occurrence of membranous pharyngitis or laryngitis affords conclusive evidence of infection by sewage-poison conveyed through either air or water. It will scarcely be denied that if this doctrine be true, it is of immense practical importance.

Savile-row.

ON

NERVE-STRETCHING IN ACUTE TRAUMATIC TETANUS: WITH TWO CASES.

BY EBEN. WATSON, A.M., M.D.,
SURGEON TO THE ROYAL INFIRMARY, GLASGOW.

THE effects of stretching upon the nerve-cords or their centres are not at present known with precision; but most experimental physiologists, as well as practical surgeons, are quite aware that nerves do bear considerable stretching without finally losing their characteristic properties. Attention was, I think, first attracted to this subject as a means of treating certain painful and spasmodic nervous affections by Nussbaum. Mr. Callender and others have since recorded their experience of the operation in cases of neuralgia, epilepsy, &c. But, except a bare notice in the *British Medical Journal* for 1876 that M. Verneuil had had a case of tetanus at La Pitié which recovered after nerve-stretching, I have not been able to find any recorded case of traumatic tetanus treated in this way. Yet I am sure that most surgeons will agree with me that the suggestion thus made is at all events worthy of a trial. I certainly have much confidence still in the Calabar bean, which I believe I was the first to recommend, for the treatment of this terrible disease; but the operation of nerve-stretching does not prevent the use, while it may possibly assist the action, of the drug. Hence, when the following cases occurred in my hospital practice, I thought I was bound to give my patients the benefit of the proposed operation; and I now feel equally bound to make the result public without delay.

Before relating these cases, I may here remark that I have found the action of the Calabar bean of late very uncertain, so that I have sometimes doubted the genuineness of the drug. It is well known that the bean is much more potent at some seasons than at others, and if this is not attended to by those who collect and send them to market we may get a very untrustworthy article. Besides, I understand that the extract requires much care and a large consumption of beans in its formation, and hence, I fear, it is not always what we expect it to be, as, indeed, my second case illustrates.

CASE 1.—I. M——, aged sixteen, was admitted to the Royal Infirmary, under my care, on the 21st November, 1877. On the 7th of the month he had the tip of his left index-finger crushed off, and the wound was suppurating but not unhealthy when I first saw it. On the 18th day of the month, and the eleventh from the injury to the finger, symptoms of tetanus commenced in the usual insidious way; but he did not come to the hospital till late on the evening of the 21st, by which time the disease was fully confirmed and the boy's strength considerably diminished. Appropriate food and stimulants were given during the night, as well as several doses of the extract of Calabar bean; but, as the disease continued unabated in severity, I next morning proposed to my colleagues to stretch the brachial nerves, and, with their consent, I at once proceeded to perform the necessary operation.

The boy was brought fully under the influence of chloroform, and I made an incision about three inches long over the upper part of the brachial artery, at once exposing the median and ulnar nerves. Then, by separating the artery and vein and turning the former a little outwards, I readily came upon the musculo-spiral behind the vessel. All the three nerves named were severally hooked up on an aneurism needle and stretched. They were laid hold of between the finger and thumb, and pulled both upwards and downwards so strongly as to move the limb and to give to my fingers a feeling of slight fatigue. The operation was performed under carbolic spray, and after the nerves had been carefully replaced, the wound was stitched up and dressed antiseptically.

The patient was then put to bed, and on recovering from the chloroform had a general spasmodic paroxysm, after which, however, he seemed better. The Calabar bean, which was now given by subcutaneous injection, acted more powerfully than before, and he was able to swallow fluids fairly well, but his pulse and temperature continued high. His perspirations were profuse, and his strength continued to fail notwithstanding the free use of stimulants. This failure of strength was so great that the house-surgeon thought it prudent to diminish the frequency of the injection of the Calabar bean; and during the night of the 23rd he took a general convulsion, and died. A post-mortem was refused.

CASE 2.—A. F——, aged thirty-five, a drayman, was admitted to my wards on Nov. 16th, 1877. A lorry-wheel had passed over his left hand and caused a ragged wound across the palm of the hand, fracturing the two external metacarpal bones. My house-surgeon dressed it antiseptically at once, and I agreed with him next day that it did not call for operative interference.

On Nov. 24th he complained of a draught from a window near his bed, and said it had given him rheumatism in the shoulder of the injured limb. Next day his mouth and neck were a little stiff, but not sufficiently to attract attention. However, on the following morning, when I visited, the characteristic expression and other early symptoms of

tetanus were quite distinct. I at once summoned my colleagues in consultation on the case, and we all agreed that nerve-stretching should again be practised. Accordingly I at once cut down on the nerves of the arm as before, experiencing a little more difficulty than in the former case, owing, I suppose, to the greater size and fatness of the limb. The three nerves were exposed and thoroughly stretched in both directions, so as to tell at once on the injured part and on the brachial plexus. I also performed partial amputation of the hand, cutting away all the torn soft parts, in which were included the injured portions of the nerves. Antisepticism was carefully attended to, as usual with all my operations, and when his wounds were dressed the patient was put to bed.

As in the former case, on recovering from the chloroform, the patient had his first general fit of spasms. It was rather severe, but being treated by repeated injections of solution of the extract of Calabar bean. He had no recurrence of general spasms, and was soon able to open his mouth widely. Sleep was produced by moderate doses of chloral, and he took fluid food and stimulants abundantly for thirteen days after the operation. His pulse varied a good deal, and his temperature continued rather high, but on the whole I had great hope of a favourable termination of the case. I am sorry to say, however, that the extract of the bean, on which we had drawn pretty largely, ran short, and the new supply which was obtained never produced its physiological effect. Hitherto there had been no general convulsions, but only occasional and sometimes frequent spasmodic contractions about the neck, but on Dec. 8th, thirteen days after the operation, he got some trifling start, took a spasm in the neck as usual, but happened to bite his tongue. The fit immediately became severe and universal, and the house-surgeon, when summoned, found him dying. I am sorry to add that in this case, as in the previous one, the friends absolutely refused to allow any part of the body to be inspected.

In remarking upon these cases, I must first give it as my opinion that though they both terminated fatally, yet in both the progress of the disease was mitigated by the nerve-stretching. This was, I think, displayed even in the first case, though the patient only lived two days after the operation; for the fits were never so violent as they had been till the last one occurred in which he died. But it was much more manifest in the second case. Here the patient was a very big and powerful man; and in all probability, if let alone, his disease would have become extremely intense and cut him off in a very few hours; whereas he lived for thirteen days, and was really progressing favourably, when he was killed by a sudden exacerbation of the disease. For it ought never to be forgotten that during the whole progress of tetanus, and for some time after convalescence may be said to have fairly commenced, the patient is still liable to have the fits re-excited by very trivial causes, such as noises or surprises of any kind; and when this does occur, it is generally found that he is ill able to bear their violence; indeed he very frequently succumbs to their first onset. Hence it is an important rule of practice, but one not easily complied with, to save the patient from all mental disquietude. Now I am inclined to regard the death of my second patient as an instance of the accidental infringement of this important rule, rather than as a failure of the means employed for his cure. No doubt, as I have already mentioned, the extract of Calabar bean latterly used did not seem to affect him as the former supply did; but, had time been given, that could have been remedied; and, at the most, it can only be said to have laid the patient more open than usual to the incident which caused his death; for, under the full and effectual employment of the bean, I have known a similar termination of the disease take place more than once previously.

I am not an advocate for the performance of any operation that can be avoided after tetanus has set in, because I fear the effects of chloroform on such patients. I am certain that they are much more weakened by the anæsthetic than other patients, and I am still more certain that while recovering from its influence they almost always take a severe paroxysm, which may possibly be fatal. This, I suppose, arises from that same mental agitation which I have remarked on above, and which is natural to anyone when coming out of the chloroform stupor. Hence I do not approve of amputation or almost any other operation requiring the exhibition of chloroform in the case of tetanic patients. Unless, therefore, I were convinced that nerve-stretching had some favourable influence on the disease, I would neither recommend nor practise it; but I confess I am now only able to say that it is an operation from which we may hope for some assistance in treating these very desperate cases. I could not, therefore, refuse any patient the benefit of it, though I am by no means sanguine of its giving us a very great numerical success. Most certainly I should not cease to use all the other means in my power as well as this operation. Complete seclusion, good nursing, appropriate food, stimulants, the Calabar bean, and occasional moderate doses of chloral are, in my opinion, the most likely measures to be taken. I must add that I have the same fear of chloral in large doses as of chloroform; for, though it puts the patient to sleep, it leaves him weaker, more excitable, and less able to contend with his disease. Nevertheless, a good many cases of so-called cure of this disease by chloral have been put on record, but I fear these are only instances of the fallacy of the argument *post hoc ergo propter hoc*, with which we are so much afflicted in medicine.

It may be interesting to some to know that my second patient, being lodged in the hospital near to the first, and hearing of his having lock-jaw before he himself took the disease was much afraid of it, and often declared he would take it. On one occasion he went into the room where the tetanic patient was lying, and was, of course, immediately ordered out by the nurse in attendance. Some may think that this strong mental impression had to do with the excitement of the disease in his case, but I myself cannot agree with that opinion. I can see no connexion between fear and any special disease, such as tetanus, and all practitioners of experience must have known many cases in which persons had the most lively apprehensions regarding particular diseases, while in nearly every case the alarm turned out to be groundless. I think the one now related is the only case in my experience in which the fear was verified in the history of the patient.

Glasgow.

THE TREATMENT OF TETANUS.

BY A. P. BOON, M.R.C.S., L.R.C.P.,
DISTRICT MEDICAL OFFICER, ST. KITTS, WEST INDIES.

THE treatment of tetanus has always been a subject of interest to surgeons, especially in the tropics, where the disease is comparatively frequent, where it is sometimes so prevalent that I have known surgeons refrain from operating, whenever it was possible, until the risk of the disease became less. It is well known that there is probably some connexion between tetanus and atmospheric disturbances, and I could, if it came within the scope of this article, adduce several interesting cases in support of this theory. It is admitted that, however much we may be in the dark as to the pathology of tetanus, we know that the mischief in the nervous system tends to right itself; it therefore seems to me that the main object of the practical surgeon, bearing this in mind, is to gain time, to keep death at arm's length; for every day the patient gets over improves his chances, and is a step towards recovery. Now, cases of tetanus may die of exhaustion, but rarely; I have never seen such a termination; they usually die suddenly of apnœa, from spasm of the muscles of respiration and of the glottis. What we have to do, then, is to keep up the patient's strength, and lessen, by all the means in our power, the severity and frequency of the tetanic spasms.

Four of the last five cases that have come under my notice having terminated in recovery, three of which were treated by myself, and two by my father, I think it worth while to record the plan of treatment; there is little, if anything, novel in it, but I venture to think that, if carried out carefully and thoroughly, it will be successful in a fair proportion of cases.

The cases are as under:—

CASE 1.—Traumatic tetanus, in a Portuguese boy, aged ten years, coming on thirty-six hours after a wound of the foot with a hoe. This case progressed favourably, the spasms becoming slight and less frequent under treatment; but on the night of the ninth day he was seized with a severe one, in which he died.

CASE 2.—Traumatic tetanus in a negro, aged eighteen years, coming on forty-eight hours after a severe sprain of the muscles of the back. Recovered.

CASE 3.—Traumatic tetanus in a negro, aged fifty years, coming on six days after the foot had been pierced by a crowbar. Recovered.

CASE 4.—Idiopathic tetanus in a negro boy, aged ten years. Recovered.

CASE 5.—Idiopathic tetanus in a Portuguese boy, aged fourteen years, coming on forty-eight hours after plunging into a trough of cold water while heated. Recovered.

The first two and the last one were cases of acute tetanus; the third was not so severe, but could hardly be classed as chronic tetanus, for at times the spasm was intense; the fourth case was one of chronic tetanus.

The course of treatment which I endeavour to carry out is as follows:—First. The room must be dark and quiet; draughts are to be carefully excluded. Too much stress cannot be placed on this; the least rush of cold air, flash of light, or even sudden noise, may bring on a spasm. On one occasion the contact of my cold hand when feeling the pulse produced one. Another case of traumatic tetanus was progressing favourably, when suddenly in the night there was an alarm of fire; great noise and confusion ensued, windows were thrown open, and, caused either by that or by the fright, severe spasms came on, in one of which he died in an hour or two.

Second. Nourishment should be given freely, in a liquid form, and at frequent intervals; it should be always warm, cold drink being avoided for the same reason that cold air is excluded. Stimulants should be administered from the first in small quantities, say four or six ounces of brandy in the twenty-four hours, and increased if the pulse indicate it. This will hardly ever be necessary; for the pulse usually keeps up to the last, death, as I before stated, being rarely from exhaustion.

Third. Never give purgatives. It is obvious that when our object is to keep the nervous system quiet we should avoid purgatives of all kinds. Imagine the amount of irritation a dose of croton oil must cause; I have seen an exacerbation of all the symptoms occur after its exhibition.

Fourth. Hydrate of chloral, together with extract of cannabis indica, is to be given in rapidly increasing doses, until the frequency and severity of the spasms are controlled. I generally commence with thirty grains of chloral in an ounce of water, and two grains of the extract of Indian hemp, in the form of pill, every three or four hours for an adult, and increase the former by fifteen grains and the latter by two grains until the desired effect is produced, when the spasms will be few and far between, the abdominal muscles almost normally flaccid, and the mouth opened to at least an inch; the patient is then in a state of stupor from which he can be roused to take nourishment. I find that sixty grains of chloral and four grains of the extract is a full dose in fairly severe cases. It seems to me that the chloral controls the frequency of the attacks, and the hemp the intensity of the muscular contractions, and consequently the dose of either drug should be increased according to these indications. It is remarkable in some cases how the disease may be controlled in this manner. For instance, in Case 3, on the sixteenth day, as there had been no spasms for seventy-two hours, I ordered the chloral to be discontinued. A few hours afterwards, in my presence, he had a severe spasm; the chloral was at once resumed, and there was no return of the disorder until the twenty-first day, when precisely the same thing again occurred. From this it will be seen how cautious we must be in leaving off the medicines. About the end of the second week, many cases are suddenly carried off by a spasm when they are thought to be out of danger. I am convinced that this happened in Case 1, and that the nurse, imagining her patient safe, relaxed her watchfulness. From what I have seen I am inclined to lessen the frequency of the doses rather than their quantity when the patient gets over the second week, and this must be done with the utmost caution.

I do not claim for this treatment that it will be invariably successful. There are cases of tetanus, as there are cases of any other acute disease, that run their course to a fatal termination, apparently defying all attempts at treatment; but I think the results of the above cases are encouraging, and hope on another occasion to record other successful cases treated after the manner I have indicated.

While writing the above I have come across, in a pamphlet on tetanus, published in 1856, by Dr. Jackson, late Presidency surgeon at Calcutta, the following passage, which singularly bears me out in the view I have taken of the treatment of tetanus. After stating that he had tried all methods of treatment without success, he goes on to say: "Ice to the spine, opium, camphor, I have tried, but I have no faith in them. I have found hemp and aloes much more beneficial, and from the use of chloroform I have seen patients derive great relief; but it was not until I had used this in combination with hemp and aloes, supporting the patient with good diet, quinine, and wine, and keeping him in a state of perfect rest, that I have met with anything like success."

I have already mentioned that death usually occurs in a spasm from apnœa. Now, even when the patient is apparently dead, we must not give up. Artificial respiration should be at once commenced and persevered with for a time; we should not wait even until the rigid muscles become partially relaxed, but the moment insensibility comes on an attempt may be made to get air into the lungs. I am convinced that many deaths from tetanus may thus be averted, at least for a time, and the patient given another chance of life.

A CASE OF IDIOPATHIC TETANUS TREATED WITH ATROPIA AND CHLORAL HYDRATE; RECOVERY.

BY E. WATSON PAUL, L.K.Q.C.P.

THE following facts may be of sufficient interest to warrant their publication.

On Sept. 28th last, I was sent for to see a patient who "Could not open her mouth." Such was the message I received. On arrival I found the patient (a young, unmarried woman) suffering from trismus, and spasm of the whole of the muscles of the neck, together with marked emprosthotonos. The patient's teeth were tightly clenched, and she could not speak, but was able to write a few words. There was no history of an injury; she referred her attack to having got her feet wet some ten days back. She had been ill five days before I was summoned. The catamenia were regular. I ordered her bowels to be immediately freed by an enema consisting of half an ounce of castor oil in a pint of warm water, after which ten grains of chloral hydrate were injected into the rectum, to be continued at intervals of an hour. Food (strong beef-tea and brandy in doses of from one to two ounces) was also administered by rectum.

Sept. 29th.—The patient to-day is much worse; there is constant spasm of the muscles; emprosthotonos much more marked; pulse weak and fluttering; countenance anxious, and symptoms altogether denoting failure of vital powers. I injected subcutaneously two minims of the solution of sulphate of atropia, made up to ten minims with glycerine and distilled water. Ordered nutrient enemata and chloral hydrate to be continued.

30th.—Patient still in a very weak state, but there was not so great exhaustion of the vital power as I was led to expect from the symptoms yesterday. The teeth are still tightly closed, and the rigidity of the muscles is very marked. The slightest sound brings on a violent paroxysm. I again injected the atropia as before.

Oct. 1st.—The patient seems a trifle better; the bowels were opened freely yesterday evening, and the pulse, if anything, is stronger. I injected the atropia as before, and ordered continuation of nutriment by the rectum.

2nd.—Slightly improved; the spasms are not so frequent, and the tongue can be protruded to the extent of an eighth of an inch between the teeth. The patient's friends, on their own responsibility, attempted to administer food by the mouth, and a violent paroxysm was the result. As the nutrient enemata have never been rejected, I ordered their continuance, also the chloral, and I again subcutaneously injected the atropia, this time increasing the dose to four minims of the solution.

3rd.—Patient's bowels not having been freed since Saturday, I ordered an enema as before. This had the desired effect. The tongue can still be protruded a short distance between the teeth, the pulse is firmer, and the paroxysms not so frequent. Attributing this improvement

to the subcutaneous injections, I again resorted to them as on the previous day.

4th.—Patient still improving slowly but surely, but the spasms are still frequent, though not so severe. Treatment as before.

5th.—Decided improvement; patient can speak indistinctly; emprosthotonos subsiding; spasms not so frequent; pulse better. Did not inject the atropia to-day, but ordered combination of chloral hydrate.

6th.—Patient still improving. Decided to let her try a little food by the mouth, but without success. Injected five minims of solution of sulphate of atropia. Bowels naturally relieved to-day.

7th.—Patient improving slowly; spasms occasionally, but not so frequent or severe.

8th.—I again injected five minims of the atropia solution, and the patient expresses herself as feeling better. The tongue is very foul, and can be protruded about a quarter of an inch.

10th.—Bowels freely relieved naturally; spasms fewer and less frequent; patient swallowed a little food by the mouth.

11th.—Improvement gradual, but sure. Discontinued the injections from this date, but continued the chloral hydrate.

12th.—No spasm for twenty-four hours; tongue cleaning; food entirely administered by the mouth.

The patient got up for the first time on the 15th, and on the following day was convalescent.

Glastonbury, Somerset.

CASE OF ACUTE TRAUMATIC TETANUS

BY W. R. G. SAMUELS, M.D., F.A.S., M.R.C.S.

I WAS sent for on June 18th, at 12 P.M., to attend on H. H——, a youth seven years of age, of English parentage. He complained of stiffness in neck and jaws, with difficulty in swallowing. He had been apparently well up to this time. The tongue appeared somewhat swollen. I endeavoured to take a good look into the oral cavity, but was prevented from doing so, the patient being unable to open his mouth more than about an inch. The glands of the neck were somewhat enlarged and tense. He was supposed to have taken cold during the day, which would in part account for the above-named symptoms. I prescribed diaphoretics combined with purgatives; a gargle of chlorate of potash to be used frequently; hot poultices of linseed-meal to the throat, on which was sprinkled some turpentine, and bottles of hot water to the feet. Urinated freely.

June 19th.—8 A.M.: The child appeared somewhat better. I found him sitting at the window almost naked; rolled him in a blanket and placed him in bed. He was still unable to open his mouth any wider than on the night previous; urinated freely. At 1 P.M. I was sent for in haste, and found him much worse, with head thrown slightly back when the paroxysms came on, tonic contractions of the muscles of the neck, while the masseter muscles were hard and rigid. Ordered chloroform liniment to be applied to the throat and neck, with a mixture containing bromide of potash and chloral hydrate, twenty-grain doses to be given every hour. I kept the patient well under the influence of the chloral hydrate, in order if possible to prevent the return of the spasms. The muscles of the abdomen were normal. On my next visit, in company with another medical man, opisthotonos was found to be present to a most alarming extent with each paroxysm. I had frequently inquired whether he had received any injury, and was always answered in the negative. However, I was determined to find out, if possible, the truth of the statement, and on making a superficial examination of the body, I found a spot on the outer and lower portion of the right leg in an ecchymotic state, with some hard substance embedded in the muscle (peroneus). On making an incision, a splinter of red wood (pine) was discovered, which was found on extraction to measure an inch and a quarter in length. From its situation I believe that it caused an irritation of the musculo-cutaneous nerve, and, as a natural consequence, by reflex action, produced tetanus, as already described. I made an incision in the direction the splinter had taken, administered brandy freely, with hot poultices of linseed-meal to the wound, and continued the chloroform liniment as before, with chloral hydrate and bromide of potassium mixture. The mother for the first time now explained that the child had been complaining of a pain in his leg for about seven days; she had, however, taken but little notice of it, having been informed that a splinter had been removed some days previous. While I was present a paroxysm came on more violent than any of the preceding ones, arching his body nearly three-quarters of a circle in a posterior direction, and throwing him completely off the bed. After replacing him, I administered chloroform by inhalation. While under its influence the muscles of the throat and neck were relaxed, but on return to consciousness they were as rigid as before. During all this time he perspired freely, which I thought a somewhat favourable symptom.

20th.—8 A.M.: Muscular irritation and contraction not abated in the least. Slept several times during the night between each spasm, the interval being only a few minutes. Opisthotonos gradually getting worse, I made a V-shaped incision a little above the seat of injury, passing the scalpel completely down to the bone, with a view of dividing the nerve. He was kept well under the influence of the chloral hydrate and bromide combined; and brandy was given every hour. Each movement in the room, touching or moving his body in the least, or the simple rustling of furniture, was immediately followed by a paroxysm. I subsequently used the galvanic battery, directing the current to the masseter muscles; also applied the positive wire to the calf of the leg, while the negative was directed to the cervical spine. During the operation and almost immediately after breaking off the current the muscles were relaxed, but soon returned to their former condition. When the current was directed to the infra-orbital nerve, the mouth could be opened a little wider than before. It is scarcely needful for me to say that when the buccal muscles were operated on, distortion of the face was the result. All this was of little or no avail, the muscles returning to their former abnormal condition. On my next visit, which was in the afternoon, I was informed that during my absence the paroxysms were more frequent and violent until 4 P.M., when a spasm occurred more severe than the rest, and the boy had ceased to breathe; asphyxia doubtless being the cause of death. Had I been present when the last attack came on, in all probability I should have performed the operation of tracheotomy, in the hope of prolonging life.

This I consider to be a case of acute traumatic tetanus; the result of the splinter entering the leg setting up irritation in the musculo-cutaneous nerve, and producing a reflex action on the spinal nerves, as quoted above. I was unable to try the effects of the Calabar bean.

San Francisco.

TETANUS IN A BOY, CAUSED BY THE STINGS OF THREE WASPS.

BY ARTHUR TUXFORD, M.D. EDIN.

BENJAMIN R——, aged twelve years, son of a labourer, living at Boston West, was brought to me on Aug. 5th, 1877, suffering, as he said, from a stiff neck, with great difficulty of swallowing. His father told me that four days previously he had been stung by three wasps, receiving one sting under the lower jaw, another near the inner canthus of the right eye, and a third immediately above the right eye. No notice was taken of them until the evening of the 4th, when he complained of the symptoms stated. After examining him I ordered him to have a warm bath, to have the muscles of the neck and back rubbed with an ammonia liniment night and morning, to be followed by the application of a hot bread-and-water poultice; and, the bowels being confined, I administered a brisk purgative, which I afterwards found did not operate.

Next day I was fetched to the lad, who was stated to be as "stiff as a board, and unable to swallow anything." I found him as represented (in fact, he might have been held out by his heels), and with the back very much arched, his jaws firmly clenched, great difficulty of swallowing, hurried respiration, his body bathed in a cold clammy sweat, his legs and feet very cold, and his bowels still confined. I ordered ice-bags to his spine and bottles of hot water to the feet, bags of heated salt to the abdomen (which was very hard), and had a castor-oil injection administered.

Aug. 7th.—Bowels still confined; patient had had no sleep; was very restless; had a very anxious expression; could bear no noise; had no pain, and was still in a cold, clammy sweat. Instead of the ice, I ordered mustard-and-vinegar plasters to be applied along the whole length of the spine, to be followed by bags of heated salt, and dropped about two drops of croton oil between his teeth.

8th.—Bowels moved early this morning; with this exception, patient about the same as yesterday. As he had had no sleep, I administered an anodyne injection.

9th.—Patient about the same; no pain; in a cold sweat still. Besides the beef-tea injections, tried to get him to swallow a little milk, but he was unable.

10th.—Slight improvement in swallowing.

11th.—Is still stiff and arched; is getting emaciated; moans a great deal; makes no complaint of pain; has no wish to take his milk; has a very depressed appearance. Abdomen very hard; to be rubbed with turpentine, and bags of hot salt to be applied. Body covered with cold sweat. Feet very cold; wrapped in flannel. Hot-water bottles to be continued, and also to be placed between and at the sides of the legs.

12th.—Back still stiff and arched; body covered with a profuse cold sweat; has no pain; great thirst; swallows better; has had no sleep; lower limbs and body very cold. Body covered with hot linseed-meal poultices. Ordered beef-tea and brandy, and chloral hydrate and bromide of potassium mixture.

13th.—As I was engaged from home, the patient was seen by my father, who ordered the spine to be well blistered and a jalap draught to be taken.

14th.—Patient seems better. Bowels have been opened. Swallows very much better; back still stiff and arched.

15th.—Much better; asks for nourishment. Back still stiff; has still cold sweats.

16th to 19th.—Still improves; voice stronger; countenance not so anxious; swallowing power fully recovered; back not so stiff; eats his food greedily.

20th.—Patient not so well; body and ankles swollen. Ordered a croton-oil pill, and, as he is restless, an anodyne draught.

21st.—Continually asking for food. Back not nearly so stiff; cold sweats leaving him; has slept well. Ordered a mixture of the tincture of muriate of iron.

24th.—Much better. Passes more water, cold sweating having entirely left him; body soft; swelling has left body and ankles, and he has lost all stiffness. To go on with the iron mixture.

27th.—Still improving; eats greedily.

30th.—Nearly well.

Sept. 3rd.—Patient up and dressed, and rapidly regaining his strength.

Boston, Lincolnshire.

CASE OF TRAUMATIC TETANUS; RECOVERY.

BY ARCHIBALD LAWSON, M.R.C.S. LOND.,
PROFESSOR OF SURGERY, HALIFAX MEDICAL SCHOOL.

THE following case is probably sufficiently interesting to be placed on record.

G. S——, a fisherman's son, ten years of age, living at Sambro, a village about twenty miles from here, on August 1st, whilst running barefooted, accidentally ran against a scythe, receiving a wound about two inches long on the instep of the left foot, which implicated the extensor tendons; also another on the little toe of the same foot, nearly severing the toe. He was brought to Halifax. Sutures were inserted and the wounds dressed. He then went home to Sambro. On August 9th I saw him for the first time, and found him in the following condition:—The jaws were firmly locked; the risus sardonicus well marked; whole body stiffened with decided opisthotonos; great difficulty in swallowing and breathing; sweating profusely; pulse 144; temperature 103°. The wound of instep was granulating healthily, the stitches having evidently sloughed out, and a small piece of bone was protruding from the little toe, which I removed. The poor boy was literally covered with poultices, all the windows religiously closed, and a fire in the stove, although it was a very hot day in August. If left in this condition much longer the boy must have soon died. Severe spasms were induced by the slightest movement. I gave him immediately fourteen grains of hydrate of chloral, and ordered eight grains to be given every hour, with a mustard poultice the whole length of spine, and milk to be given every time he took the chloral, which, however, he could only suck through the teeth, and the difficulty in swallowing made it no easy matter. I remained all night administering the chloral and milk myself.

August 10th.—Pulse 120; temperature 100°. No relief of trismus. Body still stiff, but spasms not so frequent or violent. Ordered a continuance of the chloral, eight grains every hour, with milk, and dressed the wound with carbolic acid and oil (1 to 20).

11th.—Worse again, boy refusing both milk and chloral. Temperature 101°; pulse 136, very weak. Profuse sweating; trismus continuing with opisthotonos. I remained four hours, giving eight grains of chloral every hour; he also took about half a pint of milk during this time.

14th.—Doing fairly well. Pulse 116; temperature 99°. But few spasms; trismus slightly relieved; spine still rigid, but the legs could with ease be bent upon the abdomen. Continues chloral, but takes very little nourishment. Bowels relieved by enema; passed quantities of flatus. Wounds healing well.

17th.—Had been doing well since last visit, but boy refused chloral, and the spasm had increased again. Gave sixteen grains of chloral with marked relief, and to continue eight grains every two hours; still taking the milk. Is very weak.

20th.—Decidedly better. Pulse 98; temperature 99°. Trismus and opisthotonos both relaxing. Boy still fights against both nourishment and medicine. To take ten grains of chloral every three hours.

23rd.—Scarcely any spasms except when moved, even then slight. Pulse 88; temperature 99°. Could pass my forefinger into the mouth.

From this time he recovered rapidly; the chloral was continued in small doses for a week, and then only given at night. On Sept. 7th he was able to get about.

This case is interesting, I think, in that it was a very acute case, in which recovery is rare; that no other drug except chloral was administered; no stimulants; no nourishment except milk, and very little of that, from Aug. 9th until 23rd.

Halifax, Nova Scotia.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

UNIVERSITY COLLEGE HOSPITAL.

A SERIES OF CASES OF TUMOUR OF THE FEMALE BREAST; REMARKS.

(Under the care of Mr. JOHN MARSHALL.)

THE following notes, for which we are indebted to Mr. Gadsby, late house-surgeon, indicate the chief diagnostic characteristics of a few forms of tumour of the breast. Taken as a whole, the series is exceedingly interesting and instructive from a clinical point of view, but the third case has quite a special pathological value. The histological nature of the cysts, together with the character of the delicate epithelium lining them, bespoke their lymphatic origin, although the history and the external manifestations pointed rather to cancer. Some explanatory and elucidatory remarks precede the notes of each case.

CASE 1. *Simple adeno-fibroma; removal; recovery.*—The elements in the diagnosis in this case were as follows: The patient was a healthy young woman who had never been pregnant; the tumour was freely movable in the gland-substance, and had well-defined margins and a smooth surface; neither the nipple nor the adjoining lymphatic glands were implicated; and, lastly, the tumour was only painful at the

menstrual periods. Microscopical examination confirmed the diagnosis, and demonstrated that the tumour was an adeno-fibroma, simple, but rapidly growing, as testified by the existence of a large number of small cells in the stroma.

C. F——, aged twenty-one, married one year, was admitted Oct. 29th, 1877. Never pregnant. Two years before she fell on a rock and struck her left breast; but she did not feel any inconvenience until April, 1877, when she found a lump as large as a nut in the breast, which from that time steadily increased in size. Pain was felt in the breast in damp weather and just before menstrual periods, which were regular, although the quantity had been decreasing for six months. She had been treated for congestion of the uterus, and had had continuous injections for three months up to a fortnight before admission. Mother consumptive; father strong.

On admission she looked healthy and was in good general health. There was a tumour about the size of a small orange, though much flatter, rather deep in left breast towards the outer side of nipple. It was firm, smooth, and freely movable. There were no enlarged glands in the axilla or posterior triangle of neck, no retraction of nipple; the skin over the breast was normal, though the superficial veins were slightly enlarged. No spontaneous pain, but some tenderness on manipulation.

On October 30th the tumour was removed. An incision was made downwards and outwards from the nipple on to the tumour, which was found to have a superficial fibrous attachment. This being separated, the rest of the tumour was perfectly encapsuled and shelled out readily. Three small vessels were ligatured, one drainage-tube was put in, and the wound was dressed antiseptically.

Naked-eye appearances of tumour:—Fibrous capsule generally smooth, but scattered here and there were some small granular nodules. Surface on section pinkish-yellow, non-cystic, finely granular. The microscope showed the tumour to be an adeno-fibroma; the glandular acini were lined with polygonal epithelium. The acinous tissue was abundant and fibrous, with a great number of young connective-tissue corpuscles. The patient progressed satisfactorily, and was discharged cured November 19th.

CASE 2. *Rapidly-growing adenoma, containing cysts; removal; recovery.*—In this case the tumour was an adenoma, containing cysts, which rendered it nodular. Notwithstanding the size and rapidity of the growth, neither the skin nor the lymphatic glands were involved. The tumour was, moreover, freely movable, and the margins well defined. The veins coursing over the breast were occasionally enlarged—not constantly, as in cancer,—both the congestion and the concomitant pain being probably reflected from the uterus. The black discharge from the nipple was doubtless due to hæmorrhage into some cavity communicating with the ducts. Such a discharge often occurs in cancer, but in the present instance it seems to have arisen from the rapidly-growing cysts, especially from one which contained a polypoid mass rich in bloodvessels. It is not improbable that if this polypoid mass had been left alone it would have burst through the skin, and appeared externally as one of the forms of fungus hæmatodes.

H. K——, a cook, aged thirty-three, was admitted on Nov. 5th. She first noticed pricking pains of paroxysmal character in her left breast about eighteen months before. When the pain was very intense the breast was often of a dark-purple colour, and at the same time a black discharge issued from the nipple, increased by exertion. There was no history of injury. Menstruation regular, but scanty. Family history good.

On admission there was found in the centre and upper and outer part of left breast a tumour of the size of a large orange, not adherent to the skin or pectoral muscle, nor were the veins over it enlarged. The tumour was nodular, but the projections were evidently due to cystic distension. The tumour was defined at its margin, but running outwards in the direction of the ducts the lobes of the gland felt cordy. At the extreme lower and outer part there was a pedunculated nodule the size of a nut. There were no enlarged glands in axilla or posterior triangle. On compressing the tumour firmly a peculiar crackling was felt, followed by the escape of a brownish-red fluid from the nipple, which was not retracted. Under the microscope the fluid showed blood-corpuscles, granular débris, and very large compound granulation corpuscles. General health good; occasional darting pains down the arms as far as elbow and between shoulders.

On Nov. 6th Mr. Marshall punctured the largest cyst with a trocar and cannula, and drew off nine drachms of the same dark-coloured fluid, after which the whole breast was amputated by a couple of elliptical incisions enclosing some skin with the nipple.

Naked-eye appearances of tumour:—On opening a large cyst, its inner wall was seen to be irregular, and projecting from one part was a polypoid growth as large as the end of the thumb. In the centre of gland there was a multilocular cyst, the size of a nut, with brownish mucoid contents. A number of small cysts, as large as peas, were scattered through the breast, containing dark-coloured fluid like that in main cyst. The nodule felt at lower border was evidently an adenoma. There were several isolated nodules scattered through the breast; the smaller cysts were evidently connected with these in their development, as in several places they were conjoined. With the microscope the cysts were seen to be lined with cubical epithelium. Here and there were small punctate hæmorrhages. The small nodules consisted of fibro-adenoma.

The patient made a good recovery, and was discharged.

CASE 3. *Lymphatic cysts; removal; recovery.*—Pathologically as well as clinically this case was perhaps the most interesting of the series. The hardness of the nodule in the breast, its proximity to the nipple, a doubtful induration of the lymphatic glands, and the age of the patient gave rise to the suspicion that the tumour was a slowly growing scirrhus. The nipple was, however, free, and there was no pain. By the microscope the tumour was found to be composed of numerous closed cysts, lined with a beautiful but delicate flat epithelium, with stomata between the cells. The cysts seem to have formed in the lymphatic spaces of the mammary tissue.

M. F——, servant, aged forty-six, was admitted on Nov. 5th, 1877. She first noticed a swelling a little inflamed on the right breast about six months before, but it soon subsided. She did not notice any lump or nodule until about two months before admission. She had been in ill-health at intervals for sixteen years, and had been to various hospitals. She could give no clue as to her disease. Her father died of senile debility. Mother died "out of her mind" at the age of forty-four. Two brothers and a sister are living and well.

On admission a nodule as large as a wood-nut was discovered on outer side of right nipple. It seemed faintly lobulated, and was generally free, but had a deep attachment. It was very hard, scarcely at all painful on pressure. The lymphatic glands were not enlarged, but were slightly indurated. There was no pain in the arm. There was marked lateral curvature of spine, with convexity in dorsal region towards the right side.

On November 6th the breast was removed. As the gland was very small, only a single incision was made, passing close by the outer side of the nipple, which was thus left. Wound dressed antiseptically.

Naked-eye appearance of breast:—The gland was very small and fibrous. The nodule within it consisted of a cyst filled with brownish mucoid contents. A number of smaller cysts were scattered through the substance of the breast, the contents of which varied from simple brownish serum to cheesy-looking matter. The inner walls of the cysts were perfectly smooth and bright, while the outer wall was intimately connected with structures around. A piece of cyst-wall, torn off and stained with half per cent. of solution of nitrate of silver, was found under the microscope to be lined with endothelium exactly resembling that on serous surfaces. The areolar tissue was in intimate contact with the wall of the cyst. No new growth.

She was discharged December 1st.

CASE 4. *Scirrhus; removal; recovery.*—In this case the tumour was large and very hard. The surface was irregular and the margins undefined, but the skin was not involved and the nipple not retracted. There was, however, an enlarged and indurated axillary lymphatic gland, and occasionally shooting pains extended from the breast to the axilla. All the positive signs pointed to scirrhus.

M. H. S——, aged forty-seven, married, was admitted in the early part of November. Fully eighteen months previously she noticed a small lump about the size of a bean on the outer boundary of the right breast. Nothing was done for it till June, 1877, when the patient was seen by a practitioner, who gave her medicine and applied plasters to the breast. Her mother died of phthisis, aged fifty-seven; her brother and sister also died of phthisis. The patient had had no children.

On admission, a hard mass was found in the substance of

the right breast, chiefly on the outer side of the nipple. It was pretty uniform in outline, but not well defined. The skin was not adherent, the nipple not retracted, and the veins not enlarged. A lymphatic gland deep in the axilla was enlarged and indurated, but there were no enlarged supraclavicular glands. The woman was typically healthy-looking. She says she had occasional shooting pains from the breast to the axilla.

On Nov. 15th, the breast, with the nipple and surrounding skin, was removed by a double elliptical incision. The tumour was found slightly adherent to the pectoral muscle, a few fibres of which were removed with it. The muscle did not appear implicated. After enlarging the incision upwards, the gland in the axilla was seen to be so close to the axillary vein, and attached by a broad base, that a ligature was thrown round it and drawn tight, the mass of gland taken away, and the ligature left hanging out of the wound.

On Nov. 24th the ligature separated, and next day the antiseptic dressing was left off. There was slight bleeding from the upper part of the wound, where the ligature had been. On Dec. 12th the wound was almost entirely healed.

TAUNTON AND SOMERSET HOSPITAL.

RAPID CURE OF A CASE OF ANEURISM OF THE ANTERIOR TIBIAL BY ESMARCH'S BANDAGE.

(Under the care of Mr. CORNISH.)

FOR the notes of this interesting case we are indebted to Mr. G. W. Rigden, house-surgeon.

A young agricultural labourer, aged twenty, was admitted into the hospital with the following history:—During the last week of August he wounded his right leg with a scythe. He lost a large quantity of blood at the time, but the wound healed after he had been in bed about a month. When he began to get about he noticed that his foot dropped on that side, and for this he came to the hospital for advice.

On admission, it was found that he could not raise his foot on the affected side, but there was no stiffness of the joint, the whole foot being perfectly flaccid. The cicatrix of the wound was noticed, about the middle of the outer side of the leg; and beneath this was found an ill-defined tumour, deep in the muscles of the leg, which exhibited a distinct pulsation synchronous with each beat of the heart, and on listening with a stethoscope a distinct bruit could be heard.

After he had been kept at rest in bed a few days, the tumour became much more defined; it was less in size, but the margin of it much more distinct; it was very deep, and appeared about the size of a small hen's egg. There could be no doubt it was a traumatic aneurism of the anterior tibial. It was resolved to attempt to cure it by means of Esmarch's bandage in the manner recommended by Mr. Thomas Smith in THE LANCET of May 26th, 1877.

On December 2nd, at 11.20 A.M., a flannel bandage was applied from the toes to the tumour, and a second bandage from the tumour to the middle of the thigh, leaving the tumour itself exposed. Esmarch's bandage was then applied with moderate tightness from the toes to the tumour, and the patient made to stand out of bed, in order to fill the tumour well with blood. Esmarch's bandage was then applied from the tumour to the middle of the thigh, and the thick india-rubber tubing firmly fixed above it. The tumour itself being still exposed, it was noticed that the pulsation in it was quite arrested, and no bruit could be heard with the stethoscope. The patient was then directed to keep quiet in bed with his leg well raised on pillows. He did not complain of any pain till twelve o'clock (forty minutes), when he began to have the sensation of pins and needles in his foot; this pain had become so intolerable at 12.20 (one hour after the application of the bandage) that a horseshoe tourniquet was fixed firmly at the groin, and the india-rubber tubing and Esmarch's bandage removed, the flannel bandages being allowed to remain. It was noticed that though the colour returned to the limb, no pulsation could be felt either in the tumour or in the femoral artery. A dose of chloral hydrate was given, and the patient directed to keep quiet. At 3.30 P.M. a pad of lint was fixed by strapping on the line of the femoral, and the tourniquet slightly relaxed. It was further relaxed at 4.30 P.M., and removed altogether at 7 P.M. The patient was put on a milk and beef-tea diet, and directed not to move if he could possibly help it.

There has never been the slightest return either of impulse or bruit; the tumour has gradually become smaller till now it cannot be felt at all; the power of lifting the foot returned as the tumour diminished in size, and now, in less than three weeks, is almost natural. The patient will be discharged in a few days.

PROVINCIAL HOSPITAL, PORT ELIZABETH, SOUTH AFRICA.

CASES OF LITHOTOMY.

(Under the care of Mr. FREDERICK ENSOR.)

THE following notes are interesting as much from the fact that they give a glimpse of what is being done by surgery in distant lands to alleviate human suffering, as from the intrinsic clinical value of the cases. It may be remarked that in these instances the children were of the same age (four years and a half), and admitted on the same day.

CASE 1.—A wretched emaciated little Irish boy, aged four years and a half, with tumid belly, excoriated penis and thighs, and with the bowel constantly prolapsed, was admitted on April 19th, 1877. He was constantly straining and trying to pass urine. At first glance the child seemed a most unpromising subject for operation. The mother stated that two years ago she noticed that the bowel came down, that he would kick and cry on passing water, and that he was always wet. He was physicked for the prolapse for some time, and four months before admission was sounded under chloroform, but no stone was detected.

On being brought to the hospital and examined under chloroform, a stone was at once detected. For four days the child had warm baths and gentle aperient medicine, and on April 23rd the ordinary operation of lateral lithotomy was performed. The bladder was so contracted and the stone so large as to impede the introduction of the staff, and some force was required to make the staff pass under the stone into the viscus. The child had not one bad symptom after the operation; the wound seemed to heal at once; he scarcely wetted the bed at all; and by the twelfth day the wound had quite cicatrized. The stone was a long oval concretion, very rough, with phosphatic deposit, and weighed 200 grains.

CASE 2.—The mother of this patient stated that he had symptoms of bladder irritation for two years, and had passed a concretion of about the size of a small bean. Four months after this she noticed prolapse of the rectum. No medicine was given, except an occasional dose of castor oil. He frequently had warm baths.

On admission, a stone was detected under chloroform. In addition the child, who was a fair, plump, little fellow, had symptoms of bronchial irritation and whooping-cough, which had been going on for about two weeks. The digestive organs, too, seemed out of order, as evidenced by a very loaded tongue and uneven motions. A dose of calomel and soda, and a few rhubarb draughts were administered.

On April 24th there was less feverishness, but the whooping-cough still the same. The child was, however, put under chloroform, and the operation performed. The only difficulty was in catching the stone, which was small, hard, circular, flat, and 80 grains in weight. The incision seemed deep on account of the fat, and perhaps in contrast with the first case, in which the emaciation was extreme. While under chloroform the face got very purple, and the child showed some alarming symptoms of lung obstruction.

Two days after the operation the cough got very bad, and sleep was much disturbed by it. The case began to give rise to much anxiety. Linseed-meal poultices were ordered to the back, belladonna liniment to the front of chest, and a mixture containing five grains of bicarbonate of potash, five of chlorate of potash, two drops of solution of morphia, and one of a solution of atropine was given every four hours. This treatment seemed very satisfactory. The lung symptoms and whooping-cough were decidedly improved after using the mixture for a few days. Meanwhile the wound began to suppurate moderately, the bed and sponge were freely wetted, all the water passing by the urethra on the sixteenth day, and the little fellow went out with his still more fortunate companion on the 24th.

Remarks by Mr. ENSOR.—The complication of whooping-cough is unusual in lithotomy. Some years ago I recorded in THE LANCET a case of lithotomy in a child twenty months old, in whom whooping-cough appeared three days after the operation. The case did well, but, except in those

instances where the sufferings from the presence of the stone in the bladder are very great, and seriously damaging the health, I would not again perform lithotomy when whooping-cough exists. The atropine seemed to have a decidedly beneficial effect upon the cough.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Writer's Cramp and Impaired Writing Power.

THE ordinary meeting of this Society was held on the 12th inst., Dr. C. West, President, in the chair. The evening was occupied with the reading of one exhaustive and elaborate paper upon writer's cramp, by Dr. Vivian Poore.

The following gentlemen were elected Fellows of the Society:—Dr. James Crichton Browne, Mr. C. P. Dent, Dr. W. B. Houghton, Mr. Joseph Lister, F.R.S., Mr. J. H. Morgan, Mr. W. Pye, Dr. F. T. Roberts, Dr. W. J. Voreker-Bindon, and Dr. Gerald F. Yeo.

The following is an abstract of the paper entitled an Analysis of seventy-five cases of Writer's Cramp and Impaired Writing Power, by Dr. POORE. In seventy-four of these cases the condition of the hand completely over-shadowed any other disease, whether general or local, from which the patients were then suffering. Most of the cases merited the name of writer's cramp, or had been so called, but the author has purposely included a few cases which obviously do not merit that name, because the study of them throws some light on the main question. The cases fall naturally into six groups, thus: 1, paralytic (six cases); 2, spasmodic (five cases); 3, degenerative (nine case); 4, neuralgic or neuritic (nineteen cases); 5, writer's cramp (thirty-two cases); 6, anomalous (four cases). The cases are arranged in a tabulated form. It is shown that since the ulnar nerve supplies thirteen and a half out of the eighteen intrinsic muscles of the hand its integrity is very necessary (more necessary than that of any other nerve of the hand) for all delicate manipulation, especially writing. The spasms which affect the hand, and which are particularly prone to follow attacks of hemiplegia, owe sometimes, there is good reason to believe, their character, if not their origin, to a faulty antagonisation (due to a secondary paralysis or paresis) among the muscles of the paralysed limb. Although it is commonly received that such spasms are due to disturbance of the grey cerebral matter, it is well to look also to the peripheral aspects of the question. Provided a nervous impulse, issuing from the brain, be distributed in a limb to equally irritable muscles which mutually antagonise each other, it is difficult to conceive that spasm of definite form should be produced; but should the equilibrium of antagonisation in the limb be destroyed by a secondary lesion, the production of definite spasm is easily conceivable, especially when voluntary control is lessened by a lesion of the central ganglia. In some cases of localised spasm there is no evidence of central change, and it is theoretically possible that the action of a disordered centre on a healthy periphera and the reaction of a disordered periphera on a healthy centre may be identical in their results. It is shown that loss of writing power is often the first and most prominent symptom of degenerative change occurring in the spinal cord or brain. The neuritic or neuralgic group is characterised by a painful and tender condition of the nerves of the limb, which may be induced solely by overwork, but more frequently by a strain or similar injury, combined with exposure to cold and a depressed state of health. Of the nineteen cases in this group twelve were females. Any attempt to use the arm, either for coarse or fine acts, produced fatigue, pain, and neuralgia. It is not always easy to distinguish these cases from true writer's cramp, and, indeed, there cannot be said to be any hard and fast line between the two groups; but it is characteristic of the neuralgic groups that—first, the symptoms involve a wider area; secondly, the symptoms are sometimes induced without excessive exercise of any function; thirdly, nerve tenderness or neuralgia is a prominent symptom. In the group of true writer's cramp considerable care is necessary to detect peripheral evidence of mischief, but the author states that in every case of impaired writing power which he has seen *there has been evidence more or less marked of derangement of one or more of the muscles used for writing.* This evidence consisted of—first, obvious failure to use certain muscles efficiently either for writing or for some other less complicated act; secondly, the occurrence of consentaneous movement or tremor when certain muscles were put in action; thirdly, depressed or exalted electric irritability; and, fourthly, the occurrence of sensory derangement or nerve tenderness. The muscles which are most frequently involved are those of pen-prehension rather than those of pen-movement. Reviewing the cases as a whole, attention is directed—first, to the inferences which may be drawn from an inspection of the handwriting; secondly, to the fact that joints were found to be implicated no less than twenty-one times, the joint affection being rheumatic, neuropathic, gouty, or due to strained position; thirdly, to the fact that a difficulty in writing is not very infrequently hereditary, or developed very early in life; and that, fourthly, any evidence of involvement of the nerve-centres is decidedly rare. Writer's cramp has been spoken of as a disease of "faulty co-ordination," and there can be no doubt that such is the case, for it is evident that the muscles used for writing fail to work orderly together. We are not, however, justified in assuming the existence of a special co-ordinating centre for the controlling of the act of writing, and the author has been unable to find evidence that this centre (supposing it to exist) ever gives way, leaving the periphera, except for the special co-ordinated act, in a state of perfect health. The existence of such a centre appears to the author to be improbable for the following reasons:—1. Because he has never seen a case of writer's cramp without peripheral evidence of change, and in the majority of cases there has been no evidence of any change other than peripheral. 2. Because, if there be a co-ordinating centre for writing, it must be created, as it were, by education. The co-ordination of writing, which we are many years in acquiring, must be distinguished from those co-ordinated movements (such as the symmetrical movement of the two eyes) which are wholly independent of education. The fact that no two people hold their pens exactly alike, and that it is scarcely more difficult to write with the toes than with the fingers, is much against the probability of the existence of a writing centre. 3. Because writer's cramp is never suddenly established, as aphasia sometimes is. 4. Because it is almost certain that a purely peripheral lesion may cause all the symptoms of writer's cramp. 5. The fact that the left hand (if used for writing) sometimes suffers, as well as the right, is no evidence that the change is central. In previous writings the author has spoken of writer's cramp as a "fatigue disease," and he is still inclined to adhere to the word "fatigue" as a convenient expression for an easily recognisable and familiar condition of the pathology of which we are uncertain. He is inclined to think that occasionally fatigue is the expression of hyperæmia or mild inflammation of a motor nerve, and that the same condition may be produced either by overwork or by accidental causes, such as cold, strain, "rheumatism," or injury. Fatigue especially attacks those muscles which are subjected to prolonged strain, and it is probable that the relative frequency of writer's cramp, as compared with other professional ailments, is due to the fact that prolonged strain of certain muscles (those which hold and steady the pen) is inseparable from the act of writing. Finally, as to the position of writer's cramp in the catalogue of diseases, the author would feel inclined to class it with neuralgia—that is, with a disease the phenomena of which are purely local, but which we recognise as being due not only to conditions affecting the sensory area involved, but also to molecular change affecting any part of the sensory fibre, whether before or after its junction with the nerve-centre. The author concluded by laying down certain principles of treatment for the various forms of impaired writing power.

Dr. BUZZARD remarked that a paper might be so bad as to escape discussion, or so good that no one would attempt to discuss it. The latter was no doubt the reason why no one ventured to break the silence that had prevailed after the reading of the paper; and he rose now because he felt that the Society would be wanting extremely in gratitude to Dr. Poore if some attempt were not made to enter upon discussion, although it was difficult to single out any one point from the number of facts brought together in the paper. He considered this the best *résumé* that had yet been given on

the subject of writer's cramp; and having himself paid much attention to cases of impaired writing power, he was interested to find how strongly the facts adduced by Dr. Poore coincided with his own observations. He perfectly agreed that there was no ground for regarding "writer's cramp" as a disease *sui generis*—for, as Dr. Poore had shown, it might depend on a number of different conditions. There was one cause of impaired writing power to which the author had not alluded—namely, wasting of certain muscles due to lead-poisoning. A gentleman consulted him on account of difficulty in writing, and he found there was almost total loss of irritability in the group of muscles comprising the thenar eminence. Seeing that these muscles are supplied by two nerves, it was evident that the cause of the paralysis was not traumatic, and the absence of irritability told equally against it being due to simple muscular atrophy. He therefore suspected lead-poisoning to be the cause, and on analysis the drinking-water in the house was found to contain an appreciable quantity of lead derived from the cistern in which it was stored. Dr. Buzzard had also seen several cases of impaired writing power in which there was increased irritability of the affected muscles, associated with gout. Such cases were explained on the hypothesis of the existence of a gouty neuritis, and were relieved by treatment directed to the gouty condition. Dr. Poore had adduced much evidence in favour of true writer's cramp belonging to the class of fatigue diseases, and considered it as being due to a peripheral rather than a central lesion; but he (Dr. Buzzard) did not think this view had been thoroughly made out, for there was much to be said in favour of a centric cause. There was the fact of the affection commencing in the smaller muscles, and spreading so as to involve other muscles, so that even those of the arm and shoulder might come to be involved. Then if the right hand was no longer used for writing, in time the left hand called into play would become affected—a fact which, although not perhaps occurring very often, yet occurring in some cases, was of itself a strong argument in favour of a central rather than a peripheral lesion. Dr. Poore had said that if it depended upon the derangement of a special co-ordinating centre for writing movements, that centre could not have primarily existed, but must be the result of education. But no one would doubt that all centres concerned in highly specialised actions must be the result of education, transmitted through the race, rather than the individual. Again, all the symptoms ascribed by Dr. Poore as pointing to peripheral lesion were met with in cases of central disease, especially in the different forms of sclerosis. Dr. Buzzard's own view of the causation of writer's cramp was as follows: The frequent undue use (or even the ordinary use in persons of unstable nervous equilibrium) of certain muscles in performing a special act must cause a continued state of congestion of the centre controlling the movements of those muscles. Such a congestion might eventually lead to atrophy or want of nutrition in that particular portion of the nervous centre; and hence would ensue a certain amount of paresis and consequent alteration in the muscles over which that centre presides. This again would react upon the centres themselves; for, in proportion to the difficulty of muscular action, the greater would be the amount of nervous energy directed to the limb, and this continued overflow of nervous energy would cause more and more groups of muscles to be involved. The reason why the muscles used in writing were more prone to lose their co-ordination than, for instance, those of the eyeballs, or those which kept the spine erect, probably lay in the fact that co-ordination in the latter examples had existed since man began, whereas the act of writing had only been acquired, as it were, yesterday. It was conceivable that a centre of recent formation should be more unstable and more readily deranged than the centre of co-ordination for the eyeballs or for the maintenance of the erect posture.—Dr. BROADBENT thought, with Dr. Buzzard, that it would be matter for regret if such a paper had passed without discussion. It was of great interest, not only because it contained such a mass of information on the subject, but because, almost for the first time, it afforded a solid basis for the view that writer's cramp was really a peripheral disease. He had long thought that the periphery of the nervous system had been much neglected, and the paper was a great step in the direction of rescuing peripheral disorders from this neglect. Dr. Poore, indeed, had the merit of making a beginning in the same direction with regard to peripheral nerve-lesions, as Charcot had done in centric diseases. He hoped that Dr. Poore made a marked distinction between the first three divisions of impaired writing power and those of his fourth and fifth classes, the one being central and the other peripheral, and he perfectly agreed in his rejection of a special co-ordinating centre for the act of writing. The facts adduced by Dr. Poore were sufficient to show the untenability of this hypothesis. Indeed, it seemed as if there was too much readiness to postulate centres of co-ordination, inhibition, and the like, and, speaking for himself, he could not consider co-ordination as other than the result of an association of different nerve-nuclei and fibres.—Dr. J. HARLEY asked for a definition of the term "peripheral," for in the paper Dr. Poore had said that he considered the motor nerve and the muscle together; and, if so, as in the act of writing all the impulses must come from the brain, the fatigue experienced must be in the nerve-cells.—Dr. POORE, in reply, said that in his anxiety to curtail his paper he may have stated his facts too concisely. The paper was the work of six years, and he had endeavoured to compress his facts within due limits. He had been anxious to confine himself to facts and to avoid speculation; the facts he had brought forward were mainly objective and tangible, such as altered irritability of muscles, tremor in muscles, and loss of power to perform certain acts. All, with but few exceptions (*e.g.*, in one case the impaired writing power was an early symptom of general paralysis) were peripheral facts; and he had compared the condition to that of neuralgia, which, although mainly and usually an affection of the nerve-trunk, was occasionally of central origin. So far as he had gone there was no evidence in favour of a central disorder being at the root of true writer's cramp. If, as Dr. Buzzard suggested, there was a special centre of co-ordination for writing movements, created by education, it must have a locality; and, if that be so, why was there no symptom, such as definitely localised pain &c., pointing to the congested or altered state of this centre. He had never met with a case of pure writer's cramp in which there was the slightest direct evidence of centric disorder, neither had he ever seen the writer's cramp of the text-books, in which failure of co-ordination is said to be the only evidence of disease. As to the involvement of other muscles gradually from the distal part of the limb towards the trunk, Dr. Poore had used this as an argument in favour of the "fatigue hypothesis," fresh muscles becoming fatigued by performing the work abandoned by the muscles first affected.

The Society then adjourned.

CLINICAL SOCIETY OF LONDON.

Treatment of Psoriasis.—Eruption from Bromide of Potassium.—Cancer of the Breast.—Tendon Ligatures.

THE ordinary meeting of this Society was held on the 8th inst., the President, Mr. Callender, occupying the chair. The greater part of the evening was occupied with subjects of dermatological interest, Mr. Squire showing two cases of psoriasis cured by immersion and by chrysophanic acid respectively; and Dr. Crocker exhibiting a case of bromide eruption in an adult similar in kind to those recently shown in children. Some interesting questions as to the variations in the diffusion of cancer, raised by Mr. Nunn in a paper on two cases of mammary cancer, could not be discussed owing to want of time.

Mr. BALMANNO SQUIRE brought forward two cases of Psoriasis cured by daily immersion and by chrysophanic acid respectively. The patients were present, and drawings showing the condition previous to treatment were exhibited. The first was that of a gentleman thirty-two years of age, who had suffered from psoriasis for nine years, which, appearing first in the legs and forehead, had spread over nearly the whole body, so that, except the scalp and portions of the arms, the healthy skin was reduced to mere islets. Mr. Squire prescribed a tepid bath of five hours' duration daily for a period of six weeks, and the patient faithfully carried out the treatment. The temperature of the bath was 90°F., and at the end of the six weeks the patient had lost by far the greater part of the eruption, thin bands, denoting the margins of the previous patches, alone persisting on what was now healthy skin. All itching was lost. Having at first stipulated that the baths should not extend over six weeks, Mr. Squire now changed the treatment, prescribing

phosphorus in doses of one-thirtieth of a grain once, and then three to four times a day, and treating the eruption locally with chrysophanic acid ointment (one or two scruples to an ounce). After ten days the cure was complete. Mr. Squire described the method of employing the bath and maintaining it at a constant temperature, and characterised the treatment as being efficacious, cheap, and agreeable, although making large demands on the time of the patient. Hebra had long advocated this treatment, and was in the habit of keeping patients in the bath for weeks or even months continuously night and day. The second case was also a male, thirty-four years of age, who had had psoriasis for twelve years. The eruption was most marked on the abdomen and loins, there being also a few patches on the back, chest, and legs. He was treated with chrysophanic acid ointment, the strength of which was raised from twelve grains to half a drachm to the ounce, and at the same time phosphorus was given internally. The chrysophanic acid producing an erythematous rash, it was discontinued, and petroleum ointment substituted. On the fourteenth day the phosphorus was left off, and, the erythema having disappeared, the chrysophanic acid (in the proportion of one drachm to an ounce of lard) was again resorted to. The eruption speedily and almost entirely faded under this treatment.—Dr. TILBURY FOX said that although there was no doubt the treatment by prolonged immersion was successful, it was impossible to carry it out in private practice, on account of its encroaching so much on the patient's time. Unless these cases were very severe, patients wanted some treatment which would not interfere with their daily avocations. The bath was no doubt better suited to the class of chronic indolent cases such as that shown, than to the acute form where the eruption occurs in constant fresh crops. Many remedies—as strong mercurial ointment, carbolic acid ointment, simple alkaline baths, with or by inunctions—acted equally well in these chronic cases, and he thought a strong distinction should be drawn between these and the more acute cases. He believed that a large number of cases were rendered chronic by the mal-use of stimulant remedies, and he pointed out also the varying underlying conditions—such as dyspepsia, nervous disease, gout, or struma—as indicating general treatment rather than a merely local application. As to chrysophanic acid, it was a valuable remedy in certain cases, but it has its drawbacks, and most patients object to its use from the staining it produces.—Mr. HUTCHINSON said that chrysophanic acid should be used with caution, and the patient should always be warned of what might follow its use. It was not superior to other remedies. Speaking of the cases shown to the Society, Mr. Hutchinson pointed out that there was a difference between a cure that is really permanent and one where a temporary disappearance of the rash is only obtained, and before saying that these patients were really cured of their psoriasis it would be well to await their future history. Hebra had pursued the bath treatment for upwards of twenty-five years, and his ordinary practice was to put several patients into a single bath, so that they might mutually scrub each other. In that way all psoriasis can be cured. Hebra had tried arsenic, but does not believe much in it. There were, however, many plans by which the scaly stage could be got rid of, and certainly the immersion plan was a good one for this purpose.—Dr. R. LIVEING had treated several cases with the chrysophanic acid ointment, and found that hardly any patients would put up with it unless it was used in a very mild form. He had employed it also in ringworm, but even then it must be used with caution. It stains the skin brown, and in the case of one gentleman it turned his hair from grey to a dirty mahogany tint. As to the treatment of psoriasis on Hebra's method Dr. Liveing has long prescribed a warm bath, and the free use of soft soap for half an hour, with the best results. The main difficulty, however, was, as Dr. Fox said, in the less chronic cases, and in such cases he had found Hebra's soft soap lotion effective.—Dr. CROCKER said that two years ago he used chrysophanic acid largely in cases of ringworm, and was forced to abandon it on account of its inconvenience. One boy had his hair turned a purplish brown, and Dr. Crocker could frequently recognise the subjects of his treatment solely by the peculiar colour of their hair. He noticed also that its effect was not limited to the area to which it was applied; thus, if simply applied to the scalp, it often affected the neck and face, producing an inflammatory rash and a brownish exudation. The eyes, too, were often swollen, and conjunctivitis was frequently set up by the patients getting some of the ointment into their eyes. He had seen Hebra's treatment at Vienna, and he recalled one case of almost universal psoriasis of twenty years' standing which was "cured" in three months by alkaline baths and diuretics. The cure was not, however, permanent, but it lasted some months, and in that case the patient was not prevented from following his employment. Chrysophanic acid is a powerful stimulant, and if used too early in the disease the eruption is aggravated by it.—Mr. MORRANT BAKER had used chrysophanic acid a good deal, and thought it a valuable remedy. In no case had he got rid of the scales so soon as in Mr. Squire's patient. He had also noticed, as Dr. Crocker had pointed out, that the acid not only influences the skin at the point of application, but that it produces a spreading inflammation much like erysipelas.—Dr. H. WEBER, some years ago, had seen the immersion method largely carried out in Germany, the bath being often prescribed from four to six hours in the morning and two to three hours in the afternoon. He had notes of eight cases of psoriasis thus treated, all of which were chronic, with one exception. In that case—of three or four months' duration—permanent benefit was derived from the treatment. In all the others, sooner or later (and in one not until two years), the eruption returned. Hence he concluded that the number of cases permanently cured by the immersion treatment alone was very small.—Dr. WHIPHAM referred to two cases in which ill results followed the use of chrysophanic acid—one he had recorded in the *Medical Times and Gazette;* in the other, a man who had the eruption for many years, the rash was very extensive, and the application of the acid led to considerable inflammation and the formation of pustules.—Mr. SQUIRE was sorry that the balance of opinion was against chrysophanic acid. He did not think that, as a rule, the chronic cases were the most amenable to treatment, and doubted whether it could ever be strictly said that psoriasis was cured permanently. The liability to the disease could not be cured; and he feared there was still some lingering prejudice in favour of the method of treatment of skin disease *ab intra*. He had never seen alkaline baths or tar cure psoriasis in a week or ten days. With proper care the erythema produced by the chrysophanic acid could be avoided. The acid has the property of irritating the sub cutaneous cellular tissue. The hair would not get brown after chrysophanic acid unless soap and water be used, and the stain could readily be washed off by means of benzole.

Dr. CROCKER brought forward a case of Bromide of Potassium Eruption in an adult. The patient was a man forty-nine years of age, who had been attacked with right hemiplegia and aphasia four years ago, and had been since attending at the Hospital for Paralysis, in Queen-square. He had been there prescribed bromide of potassium, combined with the iodide, in doses of ten grains of the former to five of the latter, and had taken this three times daily for nearly a month, when an acneiform eruption began to appear on the face. The rash commenced on Jan. 23rd, and on Feb. 6th he was seen by Dr. Crocker. On each cheek there was a raised patch the size of a crown-piece, of a dull lividred colour, boggy, and covered by a scab, whilst at its margin were several yellowish points exuding pus, epithelium, and sebaceous matter. There were smaller patches on the alæ nasi. Since that date the eruption has diminished, but it is still very marked. No trace of bromine or iodine could be found in the urine, which was loaded with lithates, but free from albumen or sugar. Dr. Crocker remarked that this eruption was a rare one in this country, especially in adults, although several cases had now been recorded in infants. Dr. Lees had shown a case at the Pathological Society last year, and he himself had brought one to the same society a few weeks ago. Drawings of these cases, and of an eruption due to iodide of potassium, showed the similarity between them. Abroad the eruption appears to be better known, and it must be remembered that in France the bromide is habitually given in very large doses. However, moderate doses, as in the present case and others, will frequently produce it. The rash also appeared when the bromide was given alone, but it would seem as if the iodide predisposed to its occurrence. The eruption was made up of an aggregation of papules, and was perfectly characteristic.—Mr. NUNN said that he had prescribed the bromide and iodide of potassium in every possible combination for upwards of thirty years, and in numbers of cases, and had never seen this eruption produced by it.—Dr. T. FOX said there was not the least doubt this was an

instance of bromide rash. One of the first cases he saw was that of an infant, sent to him by Dr. Glover, whose mother was taking the bromide whilst suckling her child. The rash was perfectly characteristic. He had now seen several cases of it. He maintained that it was sometimes mistaken for a syphilitic eruption, and he had had patients sent to him on that supposition, when the rash was really produced by the iodide prescribed. In the case both of the iodide and the bromide the eruption was produced by a follicular inflammation. There was evidently some idiosyncrasy in the patient; for it always appeared in such cases whenever the drug was given, and even after very small doses. He thought the eruption was most extensive when the two salts were given in combination.—The PRESIDENT hoped the Society would be enabled to see Dr. Crocker's patient at a later stage of the eruption.—Dr. GLOVER related the case referred to by Dr. T. Fox. The child was about six or eight weeks old when the rash appeared. Dr. Fox, seeing the eruption, asked whether the child were taking bromide of potassium. The child was not taking it, but the mother, who was suckling it, was. She was an epileptic, and had taken the bromide for three years. When it was left off, the eruption in the infant disappeared.—Mr. HUTCHINSON perfectly concurred in the diagnosis of the case exhibited. He had seen many worse eruptions than that produced by the iodide; and some patients at the London Hospital were frequently coming again with recurrences of their eruptions. It was not a question of dose, but one of idiosyncrasy. The patient was liable to the eruption every time he took the drug. — Mr. NUNN said the only case he had ever seen in which a patient was supposed to have had an eruption due to iodide was that of a patient in whom the rash developed while in the hospital, but never when out of it. — Mr. MORRANT BAKER had not the slightest doubt this was a bromide rash. He suggested that the absence of bromine or iodine in the urine might point to the eruption being due to an imperfect elimination of the drug. — Dr. MAHOMED, in confirmation of this, said that a well-marked instance of iodide rash occurred in a patient of Dr. Broadbent's, who died from Bright's disease. The patient shown by Dr. Crocker was also no doubt the subject of granular kidney. — Dr. CROCKER said that whoever had seen the eruption admitted its production by bromide and its relation to acne. The rash could be traced from the common form of acne indurata up to such a case as the present. It was very rare in adults. No doubt there was much in idiosyncrasy; but the French cases seemed to show there was also something in dose. Voisin described no fewer than five kinds of bromide eruption, and said it occurred in six out of ninety-six cases treated by the drug. In Dr. Lees' case some bromine was detected in the urine, but in neither of his own cases had it been found. Bromine could not be easily detected in presence of urea. He promised to bring the patient again before the Society, but remarked that the rash does not disappear rapidly.

Mr. NUNN read notes of two cases of Cancer of the Breast. He said that in 1872 he had brought two similar cases before the notice of the Society, in one case the disease lasting eight years, and in the other twelve months. He had contrasted them, and had endeavoured to answer the question why the one was stationary and the other so rapid in its progress. The first case he now read was that of a woman forty-five years of age, admitted into the Middlesex Hospital in February, 1877, with the right mamma enlarged, hard, and smooth; the skin over it was natural, but tense; the nipple was not retracted. There was not much tenderness. No family history of cancer, and she dated the enlargement of the breast from a blow inflicted six weeks before her admission, followed a week later by the appearance of a swelling at the lower part of the organ. No effect was produced by the application of mercurial inunction, belladonna, &c., and an exploratory puncture did not yield any result. However, by April 8th, the organ began to ulcerate, and soon the right upper limb became œdematous, the anasarca commencing in the region of the breast, and extending peripherally. The patient died on July 14th, barely six months after the onset of the disease. The breast and surrounding tissues were infiltrated with cancer, as were also the axillary glands on both sides. There was cancer of the pleura, and effusion into the sac. The second case was that of a woman seventy-two years old, admitted into hospital on Nov. 12th, 1873, having noticed a swelling in the right breast for two years. There were no enlarged glands. The patient was small and shrivelled in aspect; she declined operative interference, and has now been under observation upwards of four years. At one time the tumour inflamed, and then an axillary gland enlarged. In April, 1877, and again in January, 1878, portions of the growth sloughed. Mr. Nunn thought the rapid progress of the first case might be explained by believing that there the lymph-canalicular system was specially attacked. H. Arnott relates a case of a patient aged sixty, in whom lymphatic glandular enlargement occurred within a month of the appearance of a sore on the lip, and in two months the enlargement of the glands had reached the clavicle. The brawny swelling of the arm in the present case was not due to pressure on the veins; but, spreading from above, it was of grave importance, and denoted the invasion of the lymph channels by the cancer. The second case shows how an inflammatory attack in the affected breast may be followed by enlargement of axillary glands. It was important, therefore, to protect the breast from violence, and to give tonics to fortify the system against inflammatory attacks. Mr. Nunn referred to the statistics of Messrs. Sibley and Baker upon the average duration of life in cancer under varying circumstances.—Dr. GLOVER thought the question of the duration of life in cancer one worthy of inquiry. One case, now under his care, had lasted for fourteen years; and a case of gastric tumour of twenty years' duration had lately been published.—Mr. MAUNDER, regretting that there was no time for discussion, hoped that surgeons would not follow Mr. Nunn's example, and watch a cancerous tumour for weeks without attempting its removal.

Mr. CALLENDER exhibited some specimens of Tendon Ligatures, which had been obtained from Dr. Girdlestone, of Melbourne, through the kindness of Mr. Hulme, of Guildford. They were from the tail of the kangaroo, and were preferable to the catgut ligature, in their angular form, allowing of their being tied securely, the knots not slipping, and their solution does not take place so rapidly as the catgut. In Melbourne they were much used as sutures, but, as the supply of kangaroo tails was limited, Mr. Callender had proposed to obtain ligatures from the tendons of the tails of horses. He was having some ligatures prepared, and would state his experience of them at a future time.

The Society then adjourned.

PROVINCIAL MEDICAL SOCIETIES.

BRADFORD MEDICO-CHIRURGICAL SOCIETY. — At the January meeting, the President, R. R. Meade, Esq., in the chair, Mr. WHALLEY exhibited a Multilocular Ovarian Cyst, which he had removed from a woman twenty-three years old. The pedicle was secured by a Spencer Wells's clamp, and freely treated with perchloride of iron; the abdomen closed with silk sutures, and the wound dressed with dry lint. Menstruation occurred from the third to the sixth day after operation; control over bladder regained on the fourth, and over rectum on the tenth day. The pedicle separated on the fourteenth day. The pulse was about 100, and temperature ranged from 100° to 102° F., falling to normal nine days after the operation.—Drs. Bell, Goyder, and Mossop discussed the case.—The President said these cases did better in private than in hospital practice, and pointed out that much was due to deliberation, strict attention to particulars, pure air, and assiduous after-attention.—Dr. RABAGLIATI read a paper on Antiseptic Surgery, in which, after giving details of antiseptic management and the modifications of treatment in cases of abscess, operations on parts where the skin is unbroken, accidental wounds, operations through parts affected with putrid sinuses and abscesses threatening fistula in ano, he illustrated the subject from cases under his care at Bradford Infirmary and from Professor Volkmann's clinic at Halle. The following conclusions were drawn:—(1) The results are such as to warrant a fair and patient trial on the part of every surgeon; (2) the treatment is specially useful in chronic abscess dependent on caries of bone, and in cases where joints have to be laid open, and not to try it in such cases seems almost criminal; (3) in compound fractures; (4) in amputations, as a preventive to pyæmia. He characterised the antiseptic method as one of the most useful improvements in modern surgery.—In the discussion, Dr. Bell and Mr.

Whalley contended that as much success attended careful surgery without antiseptics as with them.—The President thought the treatment still *sub judice*, exclusion of air being the main thing aimed at.—Messrs. Aston, Goyder, and Moseop concurred in the value of antiseptics, the latter considering that the resistance and influence of disease germs had been set at rest by Pasteur and Lister.—Dr. Rabagliati, in reply, contended that Lister had shown that air was innocuous to wounds if purified from germs. The Abernethian method of treating psoas abscess failed if the abscess refilled and burst, which it was almost certain to do, and Lister's plan, while offering better results, secured the broken-down constitution from greater evils, and afforded opportunity for improving the general health. Mr. Spence, though an opponent of Lister's, had, in the last edition of his Surgery, recommended the antiseptic treatment in certain cases where his own failed.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.—At the last meeting, on Jan. 23rd, Mr. DOBSON showed a specimen of Fibrous Anchylosis of Tibia and Os Calcis, eleven years after excision of the astragalus. The foot had been recently amputated for disease of the lower part of the tibia. He also showed two specimens of Exostosis—(1) of the cancellous variety, from a patient nineteen years of age, from epiphysial cartilage at upper end of tibia; (2) a tumour, the size of an orange, from the internal malleolus of a young man, aged twenty-four. The growth consisted of dense ivory bone, traversed by bands of fibrous and spindle-celled tissue. The patient died six or eight months after from hæmoptysis.—Dr. MARKHAM SKERRITT read notes of a case of Subcutaneous Emphysema and Infiltration with pus following Aspiration for Pyo-pneumothorax. The patient, a woman, aged twenty-three, was admitted into the Bristol General Hospital with a history of some acute chest attack about a year previously, leaving persistent dyspnœa and cough. The physical signs were those of fluid and air in the left pleura, and of bronchitis and dry pleurisy in the right side. Aspiration was performed in consequence of the dyspnœa, and about two and a quarter pints of fetid pus and gas withdrawn from the left pleura. On the second day after, extensive subcutaneous emphysema was detected over the back and loins, with evidence, also, of the escape of pus into the areolar tissue. A free opening was made into the pleural cavity, and a drainage-tube inserted, but the patient died in about six hours. The post-mortem showed extensive infiltration of the areolar tissue with pus and gas; the lung was collapsed and bound down by old false membrane; no communication found between lung and pleural sac; recent pleurisy on right side, with œdema and congestion of lung. Dr. Skerritt believed the pneumothorax arose from decomposition in an old empyema, and drew attention to the remarkable, if not unique, accident which had followed aspiration. He also showed a specimen of Fusiform Aneurism of the Aorta, involving the vessel from its commencement to beyond the origin of the left subclavian.—Dr. G. GREIG-SMITH exhibited a specimen of Hæmorrhage into the Medulla Oblongata. The patient, a man aged forty-eight, continued sensible for nearly two hours before coma supervened. The symptoms were: left facial paralysis; imperfect paralysis, with persistent endeavours to flex the right limbs; deafness; speechlessness; contracted pupils; no strabismus; no dysphagia; no anæsthesia. Death occurred six hours after the attack. *Post-mortem:* Extreme emphysema; hypertrophy of heart, and very atheromatous cerebral vessels; the hæmorrhage distended the fourth ventricle, and caused a deep transverse rent in the upper part of the medulla, and some superficial laceration of the floor of the ventricle.—Dr. SHINGLETON SMITH exhibited an almost unique specimen of Syphiloma of the Heart, from a woman aged about thirty-five, who had fallen dead in the street, with no history of previous illness. A growth was found to have invaded the heart-muscle, but very unequally. On the left ventricular surface pale nodules were visible, extending to half an inch in depth; projecting internally were many other nodules as large as peas, growing in the muscular columns; the greater portion of the inter-ventricular septum was uniformly infiltrated, being pale in colour, and apparently having little muscle structure remaining. Microscopically the nodules were found to consist of a coarse fibrous stroma, resembling the normal stroma of the heart, but much thickened, and universally infiltrated with a very abundant small-celled growth. Elsewhere the small nuclear growth was found to infiltrate the muscle structure in all possible degrees. The muscular fibres were granular, many of them wasted, and the intermuscular septa generally thickened. No evidence of syphilis was observed in the body, but the characters of the growth were consistent only with those of new growth of syphilitic origin.

CARDIFF MEDICAL SOCIETY.—The annual meeting was held at the Infirmary Board-room, on the 31st ult.; R. F. Nell, Esq., in the chair. The report of the committee was read, and the following officers elected to serve for the year 1878:—President, Dr. Edwards. Vice-President, A. P. Fiddian, M.B. Hon. Secretary and Treasurer, Dr. Sheen. Committee: G. Evans, M.D., James Milward, Esq., H. J. Paine, M.D., and William Price, M.B.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.—The third meeting of the fifteenth session was held on the 16th ult.; Dr. Gillespie, President, in the chair.—Professor GRAINGER STEWART exhibited four patients illustrating in a marked degree the varying amount of Tendon Irritability in different forms of Paralysis. Case 1, a little boy suffering from hemiplegia. Tapping ligamentum patellæ of the healthy joint with a percussion-hammer, the foot was jerked forward; on the affected side, movements more violent. The normal irritability was wholly lost in locomotor ataxy, and this was one of the earliest and most reliable signs of the disease. Case 2, locomotor ataxy; absolutely no response to tapping the patellar tendon. Ordinary reflex movements not impaired. Case 3, with some ataxic features, but showing excessive tendon-irritability. Case 4, well-marked ataxy; no irritability of tendon.—Mr. JOSEPH BELL showed a case of Amputation at Hip-joint for a large sarcoma of the thigh.—Professor ANNANDALE showed a case of Reflex Paraplegia in a boy (no affection of the sphincters or loss of sensibility), markedly improved by circumcision of a tight prepuce. He also showed a case of compound separation of lower epiphysis of left radius and ulna, with detachment of periosteum. One inch and a half of the bare bones, along with the epiphysis, were removed, and a useful movable hand was the result.—Dr. GILLESPIE, in retiring from the chair, delivered his valedictory address, in the course of which he alluded in feeling terms to the loss the Society had sustained by the deaths of Dr. Warburton Begbie and Dr. Brotherton, of Alloa, and by the removal to London of two eminent members of the Society, Professor Lister and Dr. Matthews Duncan. The chair was then taken by the new President, Professor Sanders. Among the pathological specimens exhibited, Dr. ARGYLL ROBERTSON showed a Scirrhous Tumour of the Orbit which had displaced the eye upwards and outwards. It was removed, leaving the eye.—Mr. GEORGE BELL showed two Tumours of the Breast, one scirrhous, with epithelial cancer of the nipple, the other sarcomatous. The wounds had been treated by long drainage-tubes, coming through the antiseptic gauze dressing, and leading into a vessel under the bed containing carbolic acid. The results were very good. The first case was only ten days in hospital. In the second, there was no discharge on the dressing.—Dr. KIRK DUNCANNON showed a skull with a knitting-needle inserted through the orbit, showing the probable course such an instrument would take in a case where the brain remained uninjured.—Dr. CHURCH showed a large Salivary Calculus.—Dr. BYROM BRAMWELL (Newcastle-on-Tyne) read a paper, "Notes on Cases of Aneurism," in which he described the physical signs, symptoms, and treatment of six cases of aortic and one of innominate aneurism, besides three others which did not occur in his own practice. In the fatal cases the mode of death was detailed, and preparations of the aneurisms exhibited. Great benefit was produced in most of the cases by half-drachm doses of iodide of potassium.—Prof. Stewart remarked on the interest of the cases and the highly satisfactory nature of the treatment by iodide of potassium in large doses, which had been introduced by Dr. G. W. Balfour.—After a few remarks from Dr. Black on the frequency of aneurism among soldiers and the influence of alcohol in causing the disease, Dr. Bramwell replied.

SMALL-POX IN DUBLIN.—This disease appears to be increasing in Dublin, one hospital having twenty-eight cases under treatment, twenty of which had been admitted in one week. The Managing Committee of the Cork-street Fever Hospital have directed that an additional ward be set apart for the epidemic, and that the recovery-house be cleared for the use of convalescent small-pox patients.

Reviews and Notices of Books.

The Science and Art of Surgery: being a Treatise on Surgical Injuries, Diseases, and Operations. By JOHN ERIC ERICHSEN, F.R.S., F.R.C.S., Surgeon Extraordinary to Her Majesty the Queen, Member of the Council and of the Court of Examiners of the Royal College of Surgeons, Emeritus Professor of Surgery and Clinical Surgery in University College. Seventh Edition. Two volumes, enlarged and carefully revised. Illustrated by 862 Engravings on wood. London: Longmans. 1877.

IT is no idle compliment to say that this is the best edition Mr. Erichsen has ever produced of his well-known work. Besides inheriting the virtues of its predecessors, it possesses excellences quite its own. Not only has every page of the previous edition been carefully revised, and in some instances rewritten, but many novelties have been introduced so as to place the work abreast with latest developments of every department of general surgery. When we state that, in addition to great interstitial changes, the bulk has been increased by nearly four hundred and thirty pages, we give only an approximate idea of the amount and character of the improvements that have been effected. At least one hundred and fifty new engravings have been added, and many of the old ones redrawn in an improved style. Among the latter, Mr. Godleo's artistic and accurate representations of the microscopical appearances of some of the tumours are especially noteworthy. A separate index for each volume is another new feature that will considerably enhance the value and utility of the work.

Having stated that Mr. Erichsen has incorporated into this edition every important recent improvement in the science and art of surgery, it would be an act of supererogation to give a detailed criticism. By common consent the work has always been allowed to be at once the most comprehensive and concise exposition of surgery and surgical pathology by any single hand, in any country, and at any time. To have been translated into several European languages, and largely reprinted and reproduced in America, and to have reached a seventh edition in the vernacular is, we believe, a distinction without a parallel for a work of this size and character. It is neither necessary nor desirable to consider all the circumstances that have assisted to raise Mr. Erichsen's work on surgery into such favour; to do so would be to trace the history of surgery in this country, at all events, for the last twenty-five years. Suffice it that, numerous and varied as those circumstances have been, they have all been creditable alike to the author and to the country that claims him.

Without therefore making a close scrutiny it may be not unprofitable to note briefly some of the more salient characteristics of Mr. Erichsen's book. No one really conversant with it can fail to have noticed its strong individuality. Every proposition is stated cautiously but with clearness and precision, and, whether original or acquired, possesses a singular force and freshness. There are no random statements, no scientific fopperies, no dallyings with fashionable pathological doctrines merely because they are fashionable; above all, there is an entire abnegation of self. Herein consists the chief difference between what we understand by individuality and egotism—the mainspring, it is to be feared, of too many modern works of scientific pretensions. Mr. Erichsen's work is so compact, and, in a sense, so homogeneous that, notwithstanding the most liberal concessions and references to other workers, it is sometimes difficult to imagine that the whole is not a strictly autogeneal production. One reason of this is that it has been planned and directed by a large and well-stored mind, drawing its supplies from every available source from without and within, and, by its rare assimilative and fashioning power, giving all its emanations the semblance both of novelty and originality. We do not, of course, mean that Mr. Erichsen as a practitioner is solely dependent upon the observations of others; but we are at present considering him only in his capacity of a teacher. For this office he is qualified not only by the nature of his mind, but also by a long and well-tried experience. Early embued with the truth of the Baconian maxim, "They be the best chirurgeons which, being learned, incline to the traditions of experience, or, being empirics, incline to the methods of learning," Mr. Erichsen has always been a close and accurate observer, and a large and discriminating reader. His writings have always shown this; and it is much to his credit that his latest productions present none of the signs of that dulness or indifference to passing events and current literature which often comes upon men who have led active and busy lives, as they approach the grand climacteric.

We might continue, but have said enough. Indeed, we should not have dwelt so unnecessarily long on Mr. Erichsen's merits as writer and teacher did we not fear that in these degenerate days, when examinations are looked upon as the sole test of knowledge, and, certainly, in too many instances the only stimulus to study, there is a disposition on the part of many students to shirk the labour of mastering Mr. Erichsen's elaborate work. We cannot conclude this notice without expressing a strong conviction, based on an intimate acquaintance with many schools and many men, that no one can truly claim to have comprehended the great principles of surgery unless he have diligently and faithfully learnt the lessons which Mr. Erichsen inculcates, and followed up, more or less methodically, the fruitful train of investigation and thought which his book suggests. In short, we unhesitatingly aver that we know of no other single work where the student and practitioner can gain at once so clear an insight into the principles of surgery, and so complete a knowledge of the exigencies of surgical practice.

OUR LIBRARY TABLE.

First Principles of Human Physiology. By the Rev. W. T. PILTER, Curate of St. Clement's, Leeds. pp. 156. London: Kempster and Co. 1877.—This is one of the numerous small manuals on physiology that have been called into existence to enable science teachers to pass the first stage examination of the Science and Art Department. The treatment of the subject is of course quite elementary, but it is intelligently written, and we notice few errors. On p. 131, the author states that after pithing a frog, reflex actions can still be demonstrated. He then adds, "Destroy the spinal cord by passing a piece of blunt wire down the spinal canal, and these phenomena will at once cease." But pithing is destruction of the spinal cord. Of course an educated reader understands that in the first clause destruction of the upper part of the cord is alone intended, but the sentence is not clear to a beginner.

Two Cases of Stenosis of the Tricuspid Orifice, with Observations. By R. P. HOWARD, M.D. Montreal. 1877.—This paper is reprinted from the Transactions of the Canada Medical Association for 1877. The first case is of especial interest, having been under the author's observation for fifteen years. The patient had chorea when eight years of age, but never rheumatism; and during life the physical signs pointed to mitral and aortic disease, and, finally, tricuspid regurgitation, but the tricuspid stenosis was not diagnosed. Death occurred from cardiac dropsy, and the right auricle was found "capable of holding a good-sized orange," its muscular walls, which were fattily degenerated, being greatly thickened. The tricuspid orifice admitted the little finger to the first joint, the valve-cusps being united, and forming a fibrous septum. This contraction was greater than that of the mitral orifice, which was also funnel-shaped, and the aortic orifice was similarly stenosed from cohesion

of the valve-cusps. The second instance is that of a heart in the McGill Museum, and a figure is given in the paper showing the oval tricuspid orifice formed between united cusps. There was marked mitral stenosis in this case also, and the aortic valves were thickened. Dr. Howard notes the almost invariable association of tricuspid disease with affections of the other valves, and he contends against the idea that the lesion is of congenital origin.

Archiv für die gesamente Physiologie des Menschen. Von Dr. E. W. PFLUGER. Band XVI., Heft 1.—This number contains several excellent articles, the more important of which are—1. Ueber die Innervation der Muskelgefässe; by P. Grützner and R. Heidenhain. 2. Ueber die Innervation der Muskelgefässe; by R. Heidenhain, with the co-operation of Messrs. C. Alexander and A. Gottstein. 3. Einige Versuche und Fragen die Kenntniss der reflectorischen Drücksteigerung betreffend; by P. Grützner and R. Heidenhain. 4. Ueber die Wärmentwickelung bei der Muskelzuckung; by A. Fick. 5. Beobachtungen über die Funktionen des Rückenmarks der Schlangen; by K. Osawa and E. Tiegel.

Gazetta Medica da Bahia. Redactor principal, Dr. A. PACIFICO PEREIRA. No. 12. 1877.—This number contains: 1. An account of the sanitary condition of Bahia for three months. Yellow fever was entirely absent. There were sixty-five cases of small-pox. Beri-beri is stated to have been frequent. The total population is not, however, given. 2. Dr. Pedro S. de Magallães gives some observations to complete the history of the Filaria sanguinis found in the blood in cases of chyluria. 3. Dr. J. Remedios Monteiro on Vaccine Lymph. 4. An article, signed "S. L.," on Goa Powder.

Archivio di Chirurgia Pratica di F. Palasciano. Nos. 9 and 10, Vol. XIV. 31 Gennaro, 1878.—These parts are devoted to an account of the Medical Congress held recently at Geneva, and contain a translation into Italian of Bouchard's memoir on the Etiology of Typhoid Fever, with notices of Lombard's paper on the Medical Geography of Malaria, of Vogt's on Human Entozoa, of Carsten's on Animal Vaccination, and others of less importance.

Revista di Medicina y Cirurgia Prácticas. Edited by DON RAFAEL ULECIA Y CARDONA. Año ii., 7 Enero de 1878.—This journal corresponds in plan to the *Practitioner*, containing two or three original articles, and a number of extracts from Spanish and foreign journals. The original articles in this part are—1. Conferences on Mental Diseases, by José Esquerdo y Zaragoza. 2. A Clinical Lecture on Epithelioma of the Tongue, by Dr. Juan Creus. 3. An account of a Constrictor intended to effect the removal of Polypi of the Pharynx.

Gaceta Medica de Cataluña. Año i. Núm. 3.—This number contains an account by Dr. Cabot and Professor Rizzoli of a monster by inclusion in the sacro-coccygeal region, and also some general considerations on the pathogenic influence of the menopause, and especially on the production of uterine cancer, by Dr. E. Roig y Bofill.

MEDICAL ASPECTS OF THE ARMISTICE.

FOR the moment, at least, shot, shell, and cold steel may be eliminated from a consideration of the medico-sanitary state of the belligerent forces in Europe and in Asia, and the attention limited to the condition of the troops as to sickness alone during the interval which, it is to be hoped, precedes peace. The dearth of detailed information on the subject, both from the Russian and Turkish side, is remarkable. The former appear to withhold, with the extremest care, the returns of sickness and invaliding of their armies in the field; the latter have no means of giving accurate information on the matter if they desired to, and neither the special correspondents of the press nor the staffs of the Red Cross and other aid societies appear to be in a position to supply the facts necessary to a clear knowledge of the subject. But from incidental observations which have been made by the correspondents of the general press, and especially in Russian journals, during the period immediately preceding the armistice, it is not difficult to estimate the medico-sanitary state of things which now obtains in the seats of war in Europe and Asia.

It is well known that for some time typhus and dysentery have existed among both the Russian and the Turkish soldiers, and there is little doubt that both these diseases have, during the winter campaign, assumed formidable proportions in both armies. Under the recent reverses of the Turkish armies, indeed, these grave maladies threaten the entire disorganisation of the forces not yet disabled. On the Russian side, the ravages of these diseases are scarcely less serious. Of the number of sick among the Russian forces in Roumelia and Bulgaria there is no precise information; but as to the sick of the Russian army in Asia Minor, a telegram from Tiflis to the journal *l'Agence Internationale*, dated the 30th January, states that at that date the number of sick in hospital of the army in the field—the greater number suffering from typhus—was 24,000, 7000 at Hassankale, 5000 at Kars, and 12,000 at Erzeroum.

But this prevalence of typhus is beginning to have consequences far wider-reaching than the efficiency of the armies among whom the disease has sprung up. With every movement of the infected troops the disease has spread to the populations they have come in contact with, and the contagion is now completing what the sword, the musket, fire, and famine have left unfinished in the devastated provinces traversed by the contending forces. The disease has been carried into Constantinople itself by the sick from the army and the fugitives from the neighbouring districts, and now it is spreading there under conditions eminently favourable for its pestilential development. From Erzeroum to the Caucasian frontier the malady is scattered broadcast throughout the various villages and towns, and it is now spreading among the more populous districts of Transcaucasia with a rapidity and virulence which have struck the authorities almost with panic. Not a few of the military hospitals in Transcaucasia have been disabled by the medical and nursing staffs having been attacked with the disease. Indeed, so serious is the outbreak of typhus in Caucasia and Armenia, and so virulent the form of the disease, that the ominous word *plague* has been whispered—a word suggested not only by the history of earlier Russian campaigns in Armenia, but also by the probable existence of the disease at the present moment in Persia, near to the Russian frontier.

There is now, in fact, taking place at the seats of war a phenomenon similar to that observed at the close of the Crimean war. Typhus then existed among the Russian and the Turkish forces, and was carried by the disbanded and home-returning troops, to an extent never fully determined, among the inland populations. In Russia it is known that the loss of life occasioned among the communities through which the different detachments of the army of Sebastopol, on their withdrawal from that city, passed was very great. But the conditions favourable to the spread of the disease did not then exist among the populations within the area or near the seats of war to the extent which now obtain, and proportionately graver consequences may now be looked for.

The large quantities of Christmas-boxes sent by the evangelical diaconate of St. Petersburg to the wounded in the hospitals at Simnitza, and of which the transmission was impeded by the state of the roads and the weather, as we have previously described, reached their destination in time for distribution on the 16th of January. On that day the wards of the different hospitals were illuminated, and to each of the 2300 patients was given a Christmas-box of a New Testament, warm clothing, tea, tobacco, and spiced-bread. The next day Christmas-boxes were presented to the administrative staffs of the hospitals, medical and sanitary, consisting of six chief officers, thirty physicians, and sixty sisters and attendants. So large had been the quantity of gifts sent from St. Petersburg that, after the above distribution, a sufficiency remained for disposal among over 4000 patients in the hospitals at Sistova.

THE LANCET.

LONDON: SATURDAY, FEBRUARY 16, 1878.

AT the annual meeting of the British Medical Association, held in Edinburgh, August, 1875, the members were made aware for the first time that two medical women had been admitted into the Association, one through the agency of the Metropolitan Counties Branch, the other by a vote of the Committee of Council. In spite of shifts that would have disgusted and deterred a less persevering man, and notwithstanding the employment of every device to burk inquiry, Mr. OLIVER PEMBERTON succeeded in directing attention to this fact, and was eventually able to move a resolution to the effect that the secretary should be instructed to issue a circular addressed to every member of the Association, requesting an answer, "Yes" or "No," as to the admission of female practitioners to membership. This resolution, seconded and ably supported by Dr. MARSHALL, of Clifton, was adopted at a very large meeting, not quite unanimously, however, for there was *one* who had the courage up to the very last to show dissent. The circulars were accordingly issued, and the answers announced at the following annual meeting held at Sheffield. The Noes were 3072 and the Ayes only 1051, leaving a clear majority of 2021 opposed to the admission of women to membership. Under these circumstances it was not only competent for, but incumbent upon, the transgressors to acknowledge that they had acted unconstitutionally and had exceeded their powers in admitting women without the special consent and sanction of the Association, and to point out to their *protégées* that they must either consider themselves not duly elected or submit to formal and compulsory rejection. And by way of showing that they were in earnest, both the gentlemen who proposed and those who approved the admission of the women might at the same time have tendered their resignations and left the Association untrammeled. Failing this, there was another and smoother way out of the difficulty. The women themselves might have voluntarily withdrawn from the Association, and thereby saved the credit of those who had shown a well-meant but ill-judged disposition to befriend them. But apparently neither of these courses commended itself. A year rolled by, and the women remained in undisturbed possession, and the Council took as much notice of the answers of its members as if they had been so much waste paper. So small was the value set by the Council upon the opinion of over three thousand members, that one of the medical women alluded to was permitted, not only to be present at the Manchester meeting, but also to take part in a discussion in the section of Medicine. Even this circumstance would, in all probability, have been winked at, if Dr. WILSON FOX had not determined to bring the matter to an issue. Supported and encouraged by the strong expression of opinion of the members given two years before, Dr. WILSON FOX appealed to the Council of the Association to say definitively whether women should be allowed to attend the annual and other meetings, and to take part in the discussions thereat or not. The result of this appeal is but too well known. The alternative was either that the Council should give effect to the wishes of the members of the Association, and forbid women from attending meetings and taking part in the discussion of medical topics with men (even supposing they were allowed to remain nominal members), or that Dr. WILSON FOX should withdraw his great name and influence from the Association. Confirmed in error, and refusing to relent, the Council, through its secretary, sent the curt reply, "That Dr. WILSON FOX be informed that the Committee of Council have no power to prevent ladies who are members of the Association from attending the meetings of the Association." If they had searched deeper they might have discovered that they had no power to *admit* "ladies" as members of the Association. But no; it was more in accordance with their usual policy to ignominiously sacrifice an eminent and distinguished member of the profession to the small but restless coterie that has for years neglected no secret opportunity to foist women upon the Association and the profession.

It is clear the matter cannot rest where it is. Already a goodly number of the most influential members are stirring themselves in the question as much in the interests of their distinguished *confrère* as in those of the Association. Indeed, as regards the latter, it is known that most of the members are, personally, supremely indifferent whether the number of women of either sex in the Association be more or less. It is this indifference that has led to the present trouble. But this should not be. The British Medical Association is either worth preserving or it is not. If it be worth preserving let it be made worthy of the nation; let its management be entrusted to those who enjoy the confidence and goodwill of their fellows; and let individual members arouse themselves and set their house in order, for the evil days are nigh. If its course be almost run, let it receive the happy despatch and a decent burial, and thus be saved from spoliating hands.

THE interesting communications on the subject of tetanus which we publish in another part of our present issue serve to recall attention to this obscure and formidable disease, and lead us to inquire whether we are really much in advance of our forefathers either in its rational comprehension or successful treatment. We have recently (THE LANCET, December 15th, 1877) discussed the state of our knowledge as to its pathology, and were obliged to confess that, apart from the light afforded by some physiological experiments and a few cases, we are very much in the dark; and that the tendency of modern medical thought seems to be in a retrograde direction towards the humoral theory. The result of this view, that tetanus depends on a blood-poison, whether it be true or not, is likely to be a neglect or distrust of some of those means of alleviation which are of most proved benefit.

We are fully alive to the great attention which has been paid to therapeutic experiments in tetanus, one of the most scientific and successful of which will always be associated with the name of Dr. EBEN. WATSON. Not only have

nearly all the older drugs in the Pharmacopœia been used at various times, but every sedative or narcotic which has been discovered of late years has had a full and fair trial, and there is none which has not counted its supposed successes. Yet none of them, with perhaps the exception of Calabar bean, can be said to have maintained its reputation as a specific, or even to have gained moderate success on an extended trial. From the papers which we publish it cannot fail to be observed that no one drug or method of treatment has met with anything like general adoption, and that the special remedy or general treatment advocated by one is strongly condemned by another, and *vice versâ*. It is a strange comment upon our vaunted progress that this should be so; that some should, even if unconsciously, hold to the doctrines of CELSUS, and others go back to ARETÆUS in their therapeutics. Nor, as we see from the results of the cases now recorded, can we boast of much success, for only one of the cases of acute traumatic tetanus of any severity, that reported by Mr. LAWSON, recovered.

Before discussing the treatment, we may note one or two points of interest in relation to the etiology of the disease. The influence of mental condition in predisposing to, or determining, an attack of tetanus has long been suspected, and even firmly believed by some. It is an old belief that in an army which is dispirited or defeated, the wounded are more liable to tetanus than in those flushed with victory or success. If mental depression alone can act in this way, fear of the disease itself may certainly have equal effect. In the case narrated by Dr. WATSON, although he himself does not believe in the influence of apprehension, we have an example of this possibility, which deserves to be well weighed, and we should be inclined to attribute some importance to it as a cause. Other cases of a similar nature might readily be cited, though in some of them—where, for instance, the disease has occurred in the same family, or in near relatives—it may be questioned whether hereditary predisposition has not had an equal influence. Another curious point, which has probably a bearing on etiology, is the occasional coincidence or rapid succession of two or even three cases of tetanus in the same hospital, and perhaps in the same ward. Tetanus is a rare disease in general hospital practice, and the reports of our large hospitals furnish but few cases in a year. But it is not at all infrequent for two to occur near together. At first sight this may seem to be in favour of the poison theory, but we cannot exclude the operation of that curious law of coincidence of rare cases which we as yet only know, but do not understand; nor can we negative the influence of climatic conditions, which are strongly illustrated by tropical experience, and we must also allow a possibility of anxiety and apprehension as a cause, as in Dr. WATSON'S case.

To turn from the general causes to the special, we find in the cases recorded this week only one of peculiar interest—viz., the sting or stings of wasps, Dr. TUXFORD'S case being, so far as we know, unique in having this for a cause. But both the onset and course of the symptoms and the general history of the case lead us to entertain a doubt as to whether it was really one of true traumatic tetanus. It is at least open to question. The other cases present nothing special in their causation. Only one case of recovery of those related by Mr. ROOK was of true traumatic tetanus, and that was subacute, a fact which diminishes the statistical curative value of his judicious method of treatment.

The treatment of tetanus may be divided into surgical, general, and pharmaceutic, and the grounds of application of all have been, and still are, governed either by the views of the surgeon as to the pathology of the disease, by imitation of supposed or narrated successes, or by pure experiment, on the chance of hitting upon the possible cure for an almost hopeless disease. Of late years the surgical treatment has assumed especial importance, since experiment has shown the harmlessness of manipulating or even cutting nerve-trunks.

The surgical treatment is either curative or palliative. The removal of any irritant forms the first maxim in the treatment of tetanus. It is sound practice to search for and remove any splinter, whether of bone or wood or other foreign body, thoroughly to cleanse the wound from all dirt or pieces of clothing and the like, or to smooth a splintered or jagged bone. But this, though good practice, occasionally alone giving relief, and at least always to be followed, is by no means new, and has been in use for over two hundred years, and probably much longer. Equally important is it to remove causes of irritation due to the wound itself, whether by the incision or cauterisation of scars, the cutting away of protruding or inflamed nerve-stumps, or the endeavour by usual methods to restore healthy action in an unhealthy wound. But in more urgent cases, or as a last resort, amputation either near or at a distance above the wound was for a long time the treatment followed, more especially when, as in the case of a crushed or injured finger, no great risk is incurred by the operation; and with such treatment cures have long ago been recorded. It is rarely that a major amputation is now performed in tetanus, operations having as their object the arrest of transmission of nervous irritation having replaced them. Nerve-section, nerve-excision, and more lately nerve-stretching, have in turn been tried. For a careful study of the latter operation we are now indebted to Dr. EBEN. WATSON, whose former contributions to the therapeutics of tetanus have been so original and valuable. Nerve-stretching for any disease whatever (first performed by BILLROTH) is as yet a new operation; and in tetanus it has, so far as we know, been tried only in two recorded cases before those of Dr. WATSON, though its employment had been previously advocated by Mr. MILNER (St. Bartholomew's Hospital Reports, vol. xi., p. 287) and by Mr. CALLENDER (THE LANCET, April 22nd, 1876). Nerve-section, on the other hand, has been employed in a considerable number of cases, and with very varying results, apparently due to the nature of each case. In some few cases surgeons have not been content with nerve-section, but have excised a portion of the divided nerve. The relative merit of these three operations cannot be decided until they have been compared under similar conditions. They are all supposed to depend for success upon the arrest of transmission of irritation from the seat of injury, and, so far as they can be judged on *a priori* grounds, we may indicate their apparent differences. Nerve-section has been most successful in those cases where there has been distinct pain in the wound or along the course of nerve-trunks, or exaggerated tenderness and reflex sensibility in the wound or injured limb, or when

spasmodic movements or tonic contractions have commenced in the wound itself. In many cases it offers the advantage that it can be performed without severe operation, it may be, even subcutaneously and without chloroform, and that the reunion of the nerve often takes place completely and pretty rapidly. But this rapid reunion is in itself in some cases a disadvantage, and there are yet others. There are few parts of the body which are not supplied by branches from more than one nerve-trunk, either superficial or deep, and the nerve-supply is not constant in its distribution. Hence it is almost impossible in a given case to make sure of the division of all the filaments to the injured part, and, unless this can be done, we cannot be sure of effecting any good result. Here, then, arises the question of the point of operation. If it be done near, but not close to, the injured part, we do not know whether *all* the nerves are divided. If further away, there is the same difficulty, with the additional one of the anastomoses now known to exist between the different nerves, as shown by ARLOING and TRIPIER, which render them in some degree capable of replacing each other. And the section of all the nerve-trunks in the limb pretty high up is, in the case of the arm, serious, and of the leg not to be thought of. Excision of a portion of nerve is even more serious, though, if we can make sure of the right nerve, more certain to be successful. Both operations are more likely to succeed if we can localise pain or tenderness along a particular nerve-trunk, if it can be completely divided or excised, and if all the other nerve-trunks can be divided high up. The advantage of nerve-section over excision or cauterisation of the wound lies in the impossibility of determining how far up the nerve neuritis may have extended, and what other changes may be going on out of sight above the wound.

There are certain objections to nerve-stretching which at first sight seem serious, apart from the want of success which has been met with. The necessity for the use of chloroform, the size of the wound, the near relations to important vessels, and the severity of the operation in some cases, would deter many surgeons from attempting it. Dr. WATSON shows that the operation itself and the use of chloroform increase for a time the risk of a fatal spasm. The other objections are to a great extent disposed of by LISTER'S method. But, apart from these risks, there are others to be considered. It has been shown by VALENTIN and others that the reflex excitability of the nerves is temporarily increased by the process of stretching, unless it be very forcible; and it has been stated by VOGT and others that the possibility of stretching a nerve is very limited in degree, the changes which occur being mainly due to the effect on its connexions, and upon vessels. Moreover, they are of short duration. It might be, therefore, that the severe spasm observed by Dr. WATSON directly after the operation was due to the early effect of the stretching, and not to the chloroform, and that in another case such spasm might be fatal. But we are not disposed to deny that great advantages are offered by the operation in the fact that all the nerve-trunks of the brachial plexus, for instance, can be dealt with high up, that the changes are only temporary, and that, if combined with crushing or squeezing, as suggested by VERNEUIL, the effect may be as great as with excision. Nor can it be doubted that some part of the unusual duration of life in one of Dr. WATSON'S cases resulted from his treatment, though whether due to Calabar bean or nerve-stretching must be undecided. But the process deserves extended trial, and for the present should replace amputation, which, if done at all, should be done high up, early, and before the patient is too exhausted to bear the extra shock of the operation. We believe that nerve-stretching was recently performed at the London Hospital by Mr. JONATHAN HUTCHINSON upon the sciatic nerve, also with an unsuccessful issue.

Apart from remedial measures, surgery is supposed to afford a palliative in tracheotomy. We say "supposed," for not only does this operation appear to us to be founded upon erroneous views of the usual mode of death, but it is condemned by many whose opinion is enforced by extended experience, and it has not, in fact, had the success which its apologists anticipated. Death in tetanus is usually due either to exhaustion or to asphyxia. More commonly it would be true to say that both were combined. But the asphyxia is in nearly all cases due to spasm of the respiratory muscles, and *not* to spasm of the glottis; and the repetition of the respiratory spasm produces an ill-expanded, engorged, and oedematous state of the lungs, which leads to exhaustion; and the immediate fatal issue is often caused by an unusually long spasm, arresting entirely the already limited pulmonary circulation. Tracheotomy, combined with artificial respiration, may benefit the condition of the lungs; but more often this is already too advanced, and the operation only serves to accelerate the fatal spasm. Tracheotomy seems therefore to be contraindicated both on rational and pathological grounds, and, unless conjoined with artificial respiration, should be altogether abolished in the treatment of tetanus.

THE further consideration of the "Dental Practitioners Bill" in Parliament has been deferred until Tuesday, the 19th inst. The serious proposals to which we directed attention last week have, as might have been expected, elicited a warm protest from the profession. It can scarcely be doubted that the great body of legally qualified practitioners, whose rights are assailed by this measure, will employ the interval to place their objections before the Legislature. The worst feature of this extraordinary business is the false position in which the Colleges of Surgeons—we regret to find without exception—have placed themselves with regard to their fellows, members, and licentiates. The prospect of an increase in the number of practitioners seeking their *special* diplomas would seem to have overborne every consideration of fact and honour. There is little to add to what we urged in our last issue. The Bill is a measure which would wholly wreck the privileges of the profession. In short, from the date of its becoming law, the fully qualified surgeon of the future will be exposed to a progressive limitation of his right to select any one part of surgery as a specialty: although he is competent and qualified for the *whole*, it will be denied that he is competent or qualified for its *parts*. The present Bill only contemplates the deprivation of his right to describe himself as a "Surgeon-dentist," while it gives that privilege to a dentist who is not a surgeon. If the measure finds its way to the statute-book, it will probably be followed by similar Bills, depriving the surgeon of

the right of selecting midwifery as a specialty, and describing himself as "surgeon-accoucheur," while that privilege is accorded *persons* who are not surgeons. Hereafter the process of disqualification may be applied to ophthalmologists, aural surgeons, and the like. The principle it is required to defend is the unassailable rule that a registered practitioner should be a surgeon first and a specialist afterwards. To this the profession will do wisely, and in a public sense prudently, to adhere, let the attack be openly made, or in a roundabout fashion, with the sop of a special exemption for men "in *bonâ fide* practice at the passing of the Act," as in the Bill before us. A memorial will lie at THE LANCET office for the signature of registered practitioners. Those living at a distance may send letters to be appended. The petition must be presented on Monday next. It should be signed, and the measure thrown out or radically amended. The former procedure is preferable.

Annotations.

"*Ne quid nimis.*"

"ARMY CLOTHING INFECTION."

IN the present crisis, when at any moment our soldiers may be called upon to face the dangers and hardships of war, the health of the army is a matter of more than usual importance. We pointed out last week, in a special report on this subject, that the uniforms provided by the Army Clothing Depôt were often contaminated by the germs of zymotic diseases; but it may be objected that, notwithstanding this fact, the health of the army is on the whole good. Nothing, however, could be more fallacious than such an argument. Soldiers are, of course, picked men; further, they are compelled to take plenty of out-door exercise, and enjoy abundant, wholesome, and regular meals. An *élite*, physically speaking, of this description may wear contaminated clothes, come in contact a thousand times with the germs of disease, and yet escape contagion; but let these same men leave their comfortable quarters, and camp out in a foreign climate. To the anxieties and nervous excitement of war would be added untold hardships, and insufficient, irregular, and perhaps unwholesome food. Who can doubt but that under these influences the physical stamina of the troops would be greatly reduced? and if at this moment fresh clothes, bearing with them the germs of disease, are sent out to the army, the effect may be disastrous in the extreme. Sown broadcast under such circumstances, uniforms imported from London fever dens into the British camp may do more to ensure discomfiture than the most gallant onslaught on the part of an enemy. This is, therefore, the moment of all others when reform should be initiated, and in spending the "precautionary grant" of £6,000,000, a small portion of this sum might be most appropriately devoted to protecting the army from the dangers of an epidemic.

Reform of this description must begin with the Government factory before we can expect private contractors to take proper precautions; but as yet the only measures adopted at the Pimlico depôt are totally inadequate, and, we will add, scarcely fair towards the local ratepayers. The inspector of nuisances for the district of St. George's, Hanover-square, has rendered better service in this respect than anyone else. When, on entering a house to inspect or disinfect, in consequence of fever or small-pox, the inspector discovers that any of the inmates work for the Army Clothing Depôt, he not only warns the administration, but gives the workpeople a written certificate when the house has been properly purified. It is only on the presentation of this document that they are allowed to return to the factory. Nor is this all. The inspector will not disinfect till he has received a certificate from a doctor to the effect that the patients are cured. This has led to many complaints. Several practitioners have refused to give these certificates. They involve a certain responsibility, take a little time, and necessitate careful examination as to the process of desquamation. As a rule no compensation is offered for this extra trouble, nor has it been satisfactorily decided at what period of convalescence from eruptive fevers the danger of infection ceases.

All this naturally leads to a certain amount of wrangling, and absorbs much time; but why should an inspector, who is maintained by the local rates, devote so much energy to protecting an imperial institution, while he does nothing of the sort for local but private employers of labour? Uniforms destined for troops stationed in all parts of the British empire are stored at the Army Clothing Depôt, and the cost of this enormous warehouse and factory is defrayed out of the imperial revenue. Surely such an institution might afford to keep its own inspectors instead of trusting to an overworked parish official. If other employers in St. George's, Hanover-square, a sanitary district comprising 90,833 inhabitants, were to request the inspector to inform them when a person in their service was residing in a house where fever had broken out, the ratepayers would soon be called upon to vote a large sum to provide the numerous staff necessary for the accomplishment of such an undertaking. An expenditure of this description might produce good results; but, in the meanwhile, we protest that the Army Clothing Department have no right to obtain gratuitous assistance, which, with the limited time at his disposal, the local inspector cannot possibly give to the other local employers.

These are, however, minor considerations, when compared with the all-important fact, so amply demonstrated by our Commission, that, with or without the help of the inspector of nuisances, the precautions taken are altogether inadequate, and that Her Majesty's troops must be constantly exposed to the risk of catching fevers whenever they receive new clothes. Under these circumstances, the Government should at once take action; and we believe that, even without altering the Sanitary Act now in force, the present dangers might be almost entirely removed. The Administration should consult those whose technical knowledge and practical experience may lend weight to their advice; and then, promptly and without hesitation, adopt some simple but bold measures which, though generous in their bearing towards the sufferers, shall be severe against those who deceive the authorities. Remembering also that the death of one soldier is, to the exchequer, equivalent to the loss of £100, the Government will find the truest economy in the expenditure of any sum necessary to prevent the spread of disease. The most radical and effective of all measures would involve an entire change in the method of producing uniforms. They should all be made within the walls of Government factories, no clothes should be sent out, none entrusted to contractors; and the whole works ought to be under the constant inspection of medical officers. The private homes or lodgings of the workpeople should also be frequently visited, and this must be one of the conditions imposed on all the hands who desire to work in the Government factories.

THE GROCER'S LICENCE.

THE issue first raised by THE LANCET with respect to the social and personal mischief wrought by the grocer's licence is discussed by the lay press with the energy of a party controversy: between the advocates of temperance on the one hand, and the friends of the licence, viewed in its commercial

relations, on the other. We can only express the strongest hope that something will be done, with the least possible delay, to reduce, if not wholly remove, the evil of a special incentive to drink which the facility for obtaining intoxicating liquors without going or sending to a licensed victualler's depôt undoubtedly supplies. In July last (1877) we presented a memorial signed by 920 medical men who were deeply impressed by the evil to which we refer. It is only necessary to recall this, the initial step in the movement, to remind our readers how deeply we are interested in the reform it is proposed to carry out. It will doubtless be a point gained if the power of issuing licences can be placed in the hands of the justices instead of the Inland Revenue. One of the features of this grocers' trade which has attracted attention, particularly in the rural districts, is the immunity from magisterial and police control enjoyed by the tradesman and his customers. This would be modified if the licence were obtained after investigation from the local administration. Meanwhile the probable good effects of the change advocated must not be overestimated. It is the essence of the licence that it does not admit of any continuous supervision. Anyone may purchase a bottle of gin. Our regret is that the purchase should be possible under cover of another transaction, and that the person buying the intoxicating agent is not compelled to do so openly at a store set apart for the sale of wine and spirits, but may procure the article without the knowledge of friends whose influence might go far to prevent any abuse of the strong drink purchased. We believe that persons of both sexes who would not drink in secret if they were compelled to purchase at a public-house are induced to do so by the facilities offered by this licence. It is to this aspect of the licence and its effects we are especially concerned to direct attention, and we think it affords serious ground for an appeal to the Legislature.

NAVAL DIETARIES.

THE outbreak of scurvy in the Arctic Expedition under Sir George Nares, and the report of the Commission appointed to investigate the causes that led to that disaster, have once more called attention to the deficiencies of diet provided for our sailors in the Royal Navy. And as in time of war the efficiency of our fleet will depend directly on the health of the men, the subject ought not to be allowed to drop, especially at the present moment, when an extraordinary vote of credit has been granted by the House of Commons to place both our land and sea forces in a thorough state of efficiency in case of need. In a pamphlet just issued by Staff-Surgeon J. M. Hunter, M.D., R.N., entitled "Naval Dietaries," this important question is ably discussed. Dr. Hunter briefly reviews the improvements that have taken place in recent years, and gives a tabular statement of the present scale of dietary. That this dietary is unsuitable is shown by the fact that the men, whenever it is possible, supplement it by supplies obtained at their own cost from shore. Not only, however, is the food unsuitable, but the hours at which the meals are served are badly arranged—their breakfast being at seven, dinner at noon, tea (which is called supper) at half-past four; so that, with the exception of the last meal, which consists of biscuit and milkless tea, the men are without food for nineteen hours! Dr. Hunter has drawn up a table of improved diet, which he calculates will be nearly a penny a day less per ration than the present cost, whilst there can be no doubt of its being more varied, palatable, and nutritious. Even if this improvement be adopted, the sailors' dietary will still compare very unfavourably with that of the soldiers. This ought not to be the case. No doubt, on long voyages, the difficulty of providing fresh meat and potatoes is very great; but they ought always to be provided when the ship is in port, or during short cruises, and even when the vessel is many weeks on her voyage, a sufficiency of both fresh meat and potatoes for a weekly ration might be supplied by the adoption of the system of storage employed by the vessels engaged in the American meat trade. To show how utterly this question of the seaman's interests has been neglected by naval administrators we would point to the fact that in the naval training-ships the superiority of the diet over that of the men in sea-going ships is very marked. "There can," says Dr. Hunter, "be no two opinions regarding the present marked contrast between the diet on board the training-ships and that of sea-going men-of-war," and "when a boy is promoted to being sent afloat, he finds his increased usefulness is marked by a lessening of his food." There can be no doubt that the whole scheme of navy victualling calls urgently for complete remodelling under the supervision of specially qualified men, who would not be guilty, at least, of committing two such gross physiological blunders as keeping men nineteen hours without food, or suddenly lessening the food of young lads in passing from their training-ship to the active and arduous duties of life afloat.

BLOODLESS TRACHEOTOMY.

EVERYONE who has been called upon to perform tracheotomy upon a young child suffering from threatening asphyxia, where the venous plexuses of the neck are engorged, and each touch of the knife may flood the wound with blood, will appreciate any method of operating by which this danger can be avoided, and tracheotomy added to the list of the bloodless operations. The attempt to accomplish this has been several times made. In 1872 M. Vernueil employed the galvanic cautery instead of the bistoury in several cases with success; but this method is evidently ill-adapted for general use, as the necessary apparatus is cumbrous, and only to be found at hospitals. More recently Mons. G. Poinsot, of Bordeaux, has used Paquelin's thermo-cautery with excellent results, and his example has been followed by other French surgeons. The skin and soft parts quite down to the trachea should be divided by successive light touches of the point of the cautery, heated to a dull red colour, and when the trachea has been exposed it should be opened with the knife, and the tube inserted in the usual way. The cautery must be used lightly, or its action will be too extensive, and a thick eschar be formed; and if it be used too hot, as is well known, it loses its hæmostatic power. The cautery is not suited for opening the trachea, because the radiation from its hot point introduced into the air-passage would be harmful, and there is some risk of burning its posterior wall; while in adults it is difficult to sever the firm rings with it, and particularly if they are at all ossified, and the loss of substance that an eschar necessarily involves might cause trouble from narrowing of the air-tube. On the other hand, as the use of the knife for this purpose does not cause hæmorrhage, it is free from objection. In fat subjects the wound may become filled with molten fat; this is readily removed with a sponge. In addition to the bloodlessness of this mode of operating, Mons. Poinsot claims for it two other advantages—the spontaneous retraction of the edges of the wound, rendering unnecessary the aid of assistants for this purpose, and giving a funnel-shaped opening down to the trachea; and the protection of the wounded surfaces from the contagion of diphtheria. Slight secondary hæmorrhage has followed this operation in several cases, but in no case has it been severe, yielding readily to simple treatment. Although the wound gapes widely at first, the resulting cicatrix contracts to a small size, and has not given rise to any unpleasant symptoms in any recorded case. This appears to be one of the most useful applications of this recent addition to the surgeon's armamentarium. It pro-

mises to change tracheotomy from an operation which is always anxious and often very trying into a safe and simple proceeding; and we may hope that it will, in this way, add to the value of the operation by leading to its more frequent and earlier adoption in obstructive diseases of the larynx.

CHOLERA.

IT may be doubted whether, during the past month, Egypt has not watched with greater anxiety the progress of cholera in the Hedjaz than the progress of the war in Turkey and in Asia Minor. Notwithstanding the large contingent of troops she has sent to the war in Europe, that evil is still at a distance from her, but the cholera is near at hand, and she retains a lively recollection of the ravages of the disease in 1865-66. The outbreak of the disease in Mecca would appear to have been sufficiently serious. The total mortality there from all causes from the 24th December, 1877, to the 12th January, 1878, is stated to have been 1382, of which 785 deaths were assigned to cholera. In Jeddah the total mortality from all causes from 29th December to the 6th January, was 220, of which 96 deaths were reported as due to cholera. The last news from the Red Sea states that the disease has ceased both in Mecca and Jeddah, but it is also reported that it appeared among the land caravans destined for Persia and Damascus, and its progress among these caravans and in the districts through which they pass has still to be learned. On the sea-route northwards from Jeddah the disease was carried by pilgrims to Tor, the quarantine station for Egypt in the Sinai peninsula. One death from cholera was reported on the voyage up to the 11th January, and five deaths from the disease among the 5000 pilgrims assembled there at the latter date. These numbers must be received with considerable reserve. Egypt, however, seems as yet to be quite free from the malady. The quarantine regulations of the Egyptian Government are stated to have been enforced with unnecessary strictness, and at the expense of much suffering among the pilgrims.

INTERNAL FAT.

THE University crews have commenced practice for their annual race on the Thames, which at present is fixed for April 13th, though it is just possible that it may be rowed on April 6th to suit the convenience of the Oxford men. Each year we hear of improvements in the method of training pursued, and a discarding of many absurd restrictions and antiquated ideas. There is one notion, however, that still holds firm possession of the rowing-man's mind, and that is the doctrine of internal fat. The shortness of breath he experiences at the commencement of training, he will admit, is caused by embarrassment of the respiration and circulation before the system accommodates itself to the work thrown on it by the increased muscular exertion. But when this accommodation is effected, how is it, he argues, that he occasionally finds his wind fail him over the course unless the view of internal fat be adopted. The supposition, however, of a deposit of fat occurring to any extent at the age at which the majority of men go into training is untenable, and the suddenness with which the respiratory trouble appears and disappears is against the time-honoured view. The rational explanation of these occasional attacks of "short wind" lies in a distended condition of the bowels, either with undigested food, or flatulence, or accumulated faeces; for constipation is one of the rowing-man's chief difficulties. The dyspeptic trouble may be due to an exhausted condition of the body, and may be a sign that the muscular exertion is too severe; but generally it is due to taking a heavy meal too soon after hard exercise. The presence of undigested food, as well as accummulated faces, leads to flatulence, by which the distended bowels become still more distended. And it is easy to understand that whatever distends the bowels encroaches upon the respiratory cavity and embarrasses the breathing. Instead, therefore, of attempting to diminish an imaginary deposit of fat by increased exertion or restriction of certain articles of diet supposed to favour its formation, he should combat "this wind in the wrong place" by a change for a day or so to a lighter and more digestible diet—from beef and mutton to poultry,—and clear the intestinal canal at the earliest opportunity of the undigested residue and fæcal matter with a dose of Fredrickshall or Pullna water.

THE SEAMEN'S HOSPITAL.

THE annual meeting of this useful charity was held at the Cannon-street Hotel, on Wednesday, Feb. 6th; Mr. Brassey, M.P., presiding. It is satisfactory to notice that, in spite of the general depression, especially in the shipping trade, the hospital has been able to hold its own. This, however, has been effected only by rigid economy. Mr. Brassey urged the claims of the British sailor for support and relief during sickness with considerable eloquence. Mr. Macgregor (Rob Roy), who seconded the adoption of the report, dwelt on the fact that the removal of such a well-known object as the old hospital-ship *Dreadnought* would account much for the diminished support of the charity, as the public were not reminded every time they passed up and down the river of the excellent work that was being carried on by the Seamen's Hospital Society. Mr. Macgregor expressed a hope that some means might be devised by which this lost interest might be regained. It is to be desired that some day the liberality of the public will enable the committee to procure a river-side frontage on which to erect a building which will not only serve to attract the notice of the public, but will be more convenient and suitable for hospital purposes than the building at present occupied, which is dwarfed into insignificance by the grandeur of the buildings forming the Naval School, and the small wards of which add greatly to the cost of management. The meeting concluded with a vote of thanks, proposed by the chairman and seconded by the deputy-chairman, to the medical staff for their services during the past year.

DIABETES.

THE credit of first discovering the presence of sugar in diabetic urine undoubtedly belongs to Thomas Willis, the celebrated physician of the reign of Charles II., and for many years professor of natural philosophy at Oxford. His discovery, however, was not due to the employment of any rigid scientific method, but by a happy chance; for observing some bees greedily hovering round a specimen of diabetic urine, he tasted it and found it sweet, "*de gustibus non disputandum.*" But the fact that diabetic urine contained a peculiar solid residue was first noticed by Paracelsus more than a hundred years before Willis applied his rough test. In his treatise "De Morbis ex Tartaro oriundis," chap. I, book ii., published at Basle, 1527, the following passage occurs, and as it has never been noticed by any writers on the subject, we give it in full:—

"Diabetica Passio est, sal siccum, resolutum et scissum, per ingressum acuti membri principalis. Hoc sal est chronicum permanens et fixum. *Signa:* Sitis cum chronico tempore, dolor spinæ (quæ plerumque in ischiâ incipit); tumores in pedibus equales; urina multa, crocea atque rubicundissima; pulsus velox, et dolores in ischiâ, id est coxendice. *Cura* per anodyna solum sal scissum curatur. *Descripta anodyna:* ℞ De liquoribus papaveris ℥ss, lotii ℥j., camphoræ ℥j., rosarum plantaginis solatii ℈iss; reduc in formam liquidam."

The discovery and description of this residue was a great advance on the knowledge of the ancients, who held that

diabetes was simply an excessive filtration of the aqueous part of the blood, caused by relaxation of the kidneys. Moreover, the passage above quoted is the earliest reference to the treatment of the disease by opium. The credit of this treatment has been variously assigned to physicians of much later date.

DEATH OF M. CLAUDE BERNARD.

THIS highly distinguished French physiologist died on Sunday evening, 11th inst., and will be regretted by the whole scientific world. He was a member of the Academy of Sciences, Professor of Medicine in the College of France, and Professor of General Physiology to the Faculty of Sciences of Paris, and had thus attained the highest honours his country could give him. He was born in 1813 at St. Julien, near Villefranche (Rhone). His principal works, with which everyone is more or less familiar, and on which his fame is founded, were: "A Memoir on a New Function of the Liver," in which it was maintained that it is a sugar-producing organ, published in 1853—"A Memoir on the Pancreas, and on the part played by the Pancreas in digesting Neutral Fats," published in 1856, both masterpieces of experimental physiology, and the foundation of all the work that has since been done in this direction. In addition to these he published almost every year one or two courses of lectures delivered before the College of France, and which abound with new and interesting facts and details of novel methods of research. Thus in 1855-56 he published his lectures on experimental physiology applied to medicine; in 1857 those on the effects of poisonous and medicinal agents; in 1858 those on the physiology and pathology of the nervous system; in 1865 those on the properties of living tissues; in 1872 those on experimental pathology and on general physiology; in 1875 those on anæsthetics and on animal heat. No inconsiderable amount of work for one man to accomplish, especially when the high quality of the work is taken into consideration. In the earlier part of his career he studied under Magendie and Flourens, then at the close of their labours; and with Matteucci and Brown-Séquard attended the lectures of Longet. As long ago as 1846 he was engaged in giving lectures and demonstrations on physiological subjects in a room near the Ecole Pratique. He was an able lecturer, illustrating his lectures by numerous experiments, and, with the means at his disposal, may be said to have possessed extreme delicacy in manipulation. It is understood that he is to have a public funeral, which will no doubt be attended by a large number both of French and foreign men of science.

BLUE BILE.

AN instance of a remarkable blue colouration of the bile has been lately published in *La France Médicale* by Professor Andouard. The occurrence of such a phenomenon has been asserted by physicians of old, and instances have been met with of a similar condition in animals. The example now recorded occurred in a woman, in whose vomit were observed flakes of an intense blue tint. These led to the suspicion that she had been poisoned with copper, and a judicial investigation was ordered. It was soon ascertained that the coloured matter did not contain a trace of copper, and a microscopical examination did not reveal the presence of any lower organisms on which the blue tint could depend. This suggested that the appearance was owing to a pathological secretion, and further investigation led to the opinion that the colour depended on the bile, the pigment of which was altered. The coloured spots were treated with boiling water, the fluid was filtered, concentrated, and part was treated with nitric acid. A violet tint was produced, changing to red and then to yellow, just as a solution of biliverdin. The remainder was treated with alcohol, and the solution again filtered, evaporated to dryness, and redissolved in water. Part of the resulting solution was found to give, with Pettenkofer's test, the red of biliary acids. The remainder, treated with permanganate of potash and with chloride of barium, showed the presence of sulphuric and taurocholic acids. There could thus be little doubt that the substance was bile, the tint of which had been modified by some unknown influences. Further observation showed that the blue pigment was soluble in boiling water, but only slightly soluble in alcohol, and not at all in ether, chloroform, amyl-alcohol, or benzol. Its aqueous solution was neutral, of a bright blue tint, and, when sufficiently concentrated, fluoresced in red. It was not affected by sulphuric or hydrochloric acid. Nitric acid did not affect it in the cold, but changed it, when heated, to the tint of a dead leaf. Ammonia, potash, and soda changed the tint to a pale yellow. The spectroscope showed a relation between the substance and the oxidation products of bilirubin and biliverdin which were obtained by Jaffi and Stokvis, and designated choleverdin and cholecyanin. The other reactions showed an affinity to the black pigment obtained by Ritter from human bile, and found also in the bile of the ox, sheep, pig, dog, and cat.

THE LONDON SMALL-POX EPIDEMIC.

THE fatality of small-pox continues to increase in London, 55 fatal cases having been registered during the week ending 9th instant. The 19 other large English towns dealt with in the Registrar-General's Weekly Return enjoy a remarkable immunity from the disease. During the three weeks ending 9th instant, 129 deaths from small-pox were registered in London, whereas not a single death from this cause was recorded in the 19 other towns, having an aggregate population slightly larger than that of London.

The Metropolitan Asylum Hospitals contained 536 small-pox patients on Saturday last, against numbers increasing steadily from 137 to 542 between the beginning of October last and the 2nd inst. The number of new cases admitted to these hospitals during last week was 127, against 126 and 146 in the two preceding weeks. The number of patients in the Highgate Small-pox Hospital has, moreover, steadily increased from 26 to 57 during the past seven weeks. In the outer ring of metropolitan suburban districts 6 deaths from small-pox were registered last week, of which 3 occurred in West Ham, 1 in Kingston, 1 in Chislehurst, and 1 in Acton registration sub-districts.

THE LONDON WATER SUPPLY.

THE two Bills promoted by the Metropolitan Board of Works (*a*) for the purchase by the Board of the undertakings of the several water companies of the metropolis, and (*b*) for the construction of waterworks with a view to carry out the scheme of additional water-supply projected by Sir J. W. Bazalgette and Messrs. Bramwell and Easton, have now been printed. The former Bill will probably meet with the general assent of the local authorities in the metropolis, but considerable opposition will be offered by some of these authorities to the latter Bill. Indeed, the Board will have to meet a costly contention in supporting their Bills before Committee, and works of great public utility will, it is to be feared, be weighted with preliminary expenses not very pleasant for the ratepayers to contemplate.

A FATAL LAUNDRY.

AN illustration of the dangerous *rôle* in propagating disease which the laundry occasionally plays was given at a recent meeting of St. Olave's Board of Works. The medical officer of health reported that a serious outbreak of typhus fever had occurred at a certain yard, necessitating the removal of five persons to the hospital. On making inquiries, it was found

that a young woman who lived with her mother and brother at one of the houses brought home from "the other side of the water" some clothes to be washed, which had been worn by a patient suffering from typhus fever. The consequences were immediate and tragic. The two women, the man, and two neighbours were attacked, and four out of this number died in hospital. The house was at once closed, and most of its contents burnt, while the Board very rightly directed the medical officer to make further investigation into the circumstances of the fatal importation. We trust the inquiry will be thorough and complete, and will result in the detection of the culpable parties. A published account of the whole affair will, after a time, be desirable.

THE FACTORIES AND WORKSHOPS BILL.

IN the course of the debate at the second reading of the Factories and Workshops Bill on Monday, the 11th inst., Sir C. Forster suggested "that employers should be required to furnish lists of those taking out work, and that their hours should be subject to registration and inspection in the same manner as common lodging-houses." The ground advanced for this very proper and needful proposal was "the sweating system, under which articles are given out by employers to be manufactured at the homes of the workpeople." As Sir C. Forster pointed out, "on the distribution of the manufactured articles, there is great risk of the dissemination of any diseases that prevail among the operatives." This is the risk to which our recent Commission on Army Clothing has drawn public attention. We cordially support Sir C. Forster's proposal, A protection clause should certainly be introduced into the Bill in Committee.

PHYSIOLOGY IN SCHOOLS.

WE extract from a contemporary the following short narrative, which shows how urgently necessary it is to have the elements of physiology taught in schools:—A housemaid on retiring for the night, which happened to be a cold one, took into her bedroom a hand-stove or brazier filled with burning charcoal, and placed it by the bedside. On the following morning she was found dead. The gentleman recording this event, Mr. J. Colebrook, states that some years ago a similar event occurred to his knowledge in a country-house. Such events are fortunately rare in England, simply because the use of charcoal is rare, not because even moderately well informed people know how dangerous it is to produce carbonic acid gas in large quantities in a closed or imperfectly ventilated room. This, it appears to us, is the kind of knowledge that should be taught in every school and in every family.

DISINFECTING IN DUBLIN.

THE sanitary authorities of the city of Dublin have been busy since the commencement of this year. The death-rate of the past four months amounted to 27·4; the registered deaths were 734, against 763, the ten years' average of the corresponding period. This is a decided improvement, and becomes the more encouraging when we are further informed that the deaths attributed to zymotic diseases amounted to only 107, while the average has been 151. Thus the fatal consequences of preventable diseases have been reduced to the extent of about one-third. This result is explained by the fact that, according to the report of the superintendent medical officer, "the humble people go readily to the hospital, their clothes and bedding are disinfected or burnt if of small value, and the rooms are fumigated." From the weekly returns it appeared that 22 infected dwellings were disinfected, and 131 articles had been sent to the disinfecting chamber. Notwithstanding all these precautions, small-pox is still prevalent to an alarming extent; but this is only natural when we consider the overcrowding and poverty which, combined with dirt and slovenly habits, are more especially characteristic of the poorer quarters of Dublin than of the large towns on this side of St. George's Channel.

BRITISH MEDICAL BENEVOLENT FUND.

THE annual general meeting was held on Jan. 10th, 1878, Dr. Birkett in the chair. The report showed that, during the year 1878, £1575 was distributed in grants of immediate relief to distressed medical men, widows, and orphans; 169 persons being directly, and about 195 indirectly relieved; making a total of over 360 persons benefited. Eight annuitants were elected during the year. Mr. Webber, who had held the office of hon. financial secretary for several years, being compelled by ill-health to resign, was unanimously elected a vice-president of the Fund, and a special vote of thanks was most heartily accorded to him. Mr. Herbert W. Page, 28, New Cavendish-street, W., was elected hon. financial secretary. Votes of thanks were accorded to Messrs. Churchill for their kindness in supplying a committee-room; to the auditors, Messrs. T. H. Hills and E. Parker Young; to the Editors of the Medical Journals; to Dr. Jonson, as chairman of committee; to the treasurer and hon. secretary; and to Sir George Burrows, the president.

SOUTH AFRICA.

OUR correspondent at Cape Town writes:—"You have on several occasions during the past year referred to the advantages of South Africa as a health resort, and have drawn attention, at the same time, to the fact that the voyage has lately been reduced in time from twenty-eight or thirty to about twenty days, with corresponding facilities and comforts in transit. I hear, however, from a person now travelling about the Transvaal and the Orange Free State, that too little discrimination appears to be exercised on the part of our leading physicians in recommending to pulmonary clients a brief or protracted residence in these countries or in Cape Colony. From what has as yet been communicated, I gather that the climate is capricious, that comfortable accommodation (according to English notions of comfort) is exceedingly difficult to obtain, and that anyone who starts for the Cape without some definite notion as to the cost and peculiarities of travelling, will certainly be much astonished, and, may be, grievously disappointed."

DR. ALBERT WALSH.

WE have much pleasure in contradicting, upon unquestionable authority, a statement which has been circulated to the effect that our distinguished Irish *confrère*, Dr. Albert Walsh, had been compelled to resign his appointment as surgeon *en chef* to the Adelaide Hospital, in consequence of ill-health. We are happy to be in a position to state that such is not the fact, and that his resignation of the office was consequent upon circumstances far more satisfactory to himself, and more gratifying to his numerous friends and admirers. How thoroughly his services are appreciated by those most competent to express an opinion will be best evidenced by the following resolution unanimously adopted by the authorities of the hospital on the occasion of their reluctant acceptance, after much discussion on their part, of his resignation of the post of senior surgeon to the institution, which he was mainly instrumental in founding, and to the well-won favour of which, as a clinical school, he has been so large a contributor:—

"That the Medical Board of the Adelaide Hospital, in accepting Dr. Walsh's resignation of the surgeoncy of the Adelaide Hospital, desire to place on record their sense of the eminent services rendered by Dr. Walsh during his long

connexion with the institution, in the origination of which he took such a prominent part, and to the success of which, both as a clinical school and a public charity, he so largely contributed, and hereby request that he will accept the post of consulting surgeon to the hospital, whereby the board may continue to have the benefit of his skill and experience."

CHEMICAL NOTES.

M. BERTHELOT recently exhibited to the Académie des Sciences a specimen of persulphuric acid, a liquid closely analogous to anhydrous sulphuric acid. It was obtained by mixing equal volumes of sulphuric acid and pure oxygen, and then passing an electric current through them for seven or eight hours. M. Berthelot, in his communication, pointed out that the compounds of such substances as chlorine, iodine, chromium, manganese, sulphur, &c., with oxygen, possess different properties, and that those which contain a similar proportion of oxygen have analogous characters. Below five equivalents of oxygen the properties of the compounds are related to the substance from which they take their name. Above five equivalents the properties of the new bodies depend solely on the oxygen they contain. At the same meetings M. Dumas announced that M. Raoul Pictet has succeeded in obtaining a volume of liquid oxygen equal in bulk to a hen's egg, and from this he has been able to ascertain its density, which is nearly that of water.

CÆSAREAN SECTION.

DR. J. BRAXTON HICKS performed this operation on Tuesday night at Guy's Hospital upon a woman whose vagina was occupied by a scirrhous mass which involved the rectum and recto-vaginal septum. The placenta was found beneath the line of incision and the fœtal head at the fundus uteri. However, the membranes were reached from the lower end of the uterine wound, and the head seized and brought out first. There was very little hæmorrhage; the uterus contracted firmly after the removal of placenta. The uterine wound was brought together by interrupted sutures closely placed; and a large catheter retained in the uterus, passing through the vagina, to prevent accumulations and facilitate injections in case of need. The child, slightly premature, was living up to last account.

THE CHILDREN'S HOSPITAL, PENDLEBURY.

THE new pavilions and wards lately added to the Hospital for Sick Children, situated at Pendlebury, were formally opened last month, the Bishop of Manchester, among others, taking part in the ceremony. The establishment is now provided with 168 beds, exclusive of the accommodation set apart for patients with infectious diseases, and, together with a dispensary in Gartside-street, has cost upwards of £50,000. We learn from the *Manchester Guardian* that an experiment which is of the highest interest and importance to the profession is to be tried at the hospital. This is no less than the institution of a system of paying the medical officers of the charity for their services.

HÆMATOZOA AND CHYLURIA.

THOSE of our readers who are interested in this subject will find a translation of Dr. Da Silva Lima's paper published in the current number of the *Veterinarian*. In the article originally published in the *Gazeta Medica da Bahia*, and already referred to in our columns, Dr. Lima attempts a complete history of the hæmato-chylurous question. In reference to the parasites concerned in the production of chyluria, M. Le Roy de Méricourt has added an important summary of, and comment upon, the contents of the article by Dr. Cobbold, which appeared in our pages last October. This is added to the translation.

MARLBOROUGH HOUSE.

THE little bill for cleansing, making good the drainage, and generally placing in decent order the basement of Marlborough House is reported to amount to £10,000. The work is of necessity, from the site of the building with reference to the metropolitan sewers, a piece of patchwork; and if it be not done thoroughly well for patchwork, it cannot be said to be from any want of expenditure. Let us hope that the work has been so satisfactorily done that even the sanitary administration (if, indeed, such administration exists, which is doubtful) will find it difficult to put the drainage wrong, and that it may be safe from enterprising plumbers, builders, and their satellites.

THE Society of Public Analysts appear extremely desirous of establishing friendly relations with the laboratory officials at Somerset House. At the last annual meeting of the Society, held under the presidency of Dr. Dupré, a proposal was carried that the principal chemist of the Inland Revenue should be asked to read a paper at one of the meetings of the analysts, and "to lay definitely before the Society the bases on which they (i.e., the Somerset House chemists) work as regards milk and other things, pointing out their reasons for differing from the Society's standard and the modes of procedure which they adopt." We very much question the expediency of the proposal, and doubt whether the request will be acceded to. The Government chemists constitute the court of appeal to which cases of conflicting analytical evidence are referred, and from what we have seen of the amazing discrepancies of experts in law courts, a close *rapprochement* between the laboratory and the Society of Public Analysts is to be discouraged.

AT a late meeting of the Commissioners of Sewers the Medical Officer of Health for the City adverted to the inconvenience and dangers to the public health occasioned by the delay in reporting to him the existence of infectious diseases, particularly referring to recent cases of small-pox and fever which had been under the treatment of dispensary medical officers. We have no doubt that a circular addressed to these gentlemen would induce them to comply with what is now the general practice of reporting to the medical officer of health the occurrence of every case of infectious disorder. Dr. Saunders has also called the attention of the Commissioners to the fact that beds and mattresses upon which patients suffering from fever &c. had lain and died are taken away unfumigated by dustmen, and then carried off, mixed with general refuse, to Lett's wharf, where a large number of persons are employed.

THE Birmingham Medical Societies have, by unanimous resolutions, appointed special committees to act together in the Provident Dispensary question. At the first meeting of of the Joint Committee the executive was thus constituted: President, Mr. Sampson Gamgee; Vice-Presidents, Drs. D. H. Monckton and James Sawyer; Treasurers, Messrs. T. Watkin Williams and James Harmar; Hon. Secretaries, Drs. Thomas Savage and J. B. Welch. The Secretaries will be happy to receive information on the constitution and working of existing Provident Dispensaries.

A PAPER on the Progress of Chinchona Cultivation and Alkaloid Production in India was read at a late meeting of the Pharmaceutical Society by Mr. H. C. Wood, quinologist and chemical examiner to the Bengal Government, which is now wisely published in the journal of the Society. Mr. Wood appears to regard the "chinchona febrifuge" with considerable favour as a supplementer of quinine, and says that from 10,000 to 12,000 pounds of the febrifuge can be annually issued.

THE Edinburgh Medical Missionary Society has made an appeal for increased support, and we trust it will meet with a liberal response. The institution deserves the material assistance of the wealthy and the best wishes of all, whether in or out of the profession, in the noble work it has been now carrying on for some years. To those anxious to know something of the scheme and details of its operation, we commend a perusal of the quarterly report of the Society, just issued.

THE death-rate of London last week was 26·4 per 1000 per annum, and exceeded by 138 the average numbers in the corresponding week of the last ten years. The 1813 deaths included 55 from small-pox, 40 from measles, 37 from scarlet fever, 10 from diphtheria, 114 from whooping-cough (which continues to be the most fatal of the zymotic class of diseases), 28 from different forms of fever, and 22 from diarrhœa. Diseases of the respiratory organs accounted for 502 deaths, against 448 in the week previous.

IN Manchester, Salford, and adjoining localities, collections were made last Sunday at the various places of worship in aid of the medical charities of the district. Information respecting the hospitals and dispensaries and their work had been widely distributed beforehand, and it is satisfactory to record that, in spite of the depressed condition of trade, a Hospital Sunday has for the eighth time been successfully celebrated.

THE *Sanitary Journal for Scotland* reports that there is now every prospect of a speedy abatement of the fever epidemic which has prevailed for some time in Airdrie. The outbreak, to which we have before alluded, was persistent and somewhat virulent, the worst type of the disease being confined to one quarter of the town where the houses are of a wretched description. In this district fourteen cases were taken out of two tenements in the same street and conveyed to the hospital.

AMONG the notices of questions in the House of Commons on Tuesday, the 19th inst., is the following:—"To ask the Under-Secretary of State for Foreign Affairs if he can afford any information as to how the Russians disposed, and what has become, of Doctors Armand, Leslie, and Neville, two of whom are British subjects, who were made prisoners by the Russians at Kramali early in January?"

THE Committee of Management of the Sussex County Hospital, Brighton, having recommended that a Convalescent Home should be established in connexion with it, notice has been given that a governor will, at the Annual General Court of Governors, on Wednesday next, move that the recommendation be carried out.

THE deaths registered in Kensington in the five weeks ending February 2nd amounted to 356, being 59 above the average number for the corresponding period in the last ten years. No death from small-pox has been recorded since September last, but the disease still lurks in the district in a mild form.

THE Visitors of the North Wales Counties Lunatic Asylum, Denbigh, at their annual meeting, unanimously decided, upon the recommendation of the House Committee, to enlarge the male side so as to accommodate 120 more patients, at a cost of about £7000.

AT a meeting of the Council of the Royal College of Surgeons in Ireland on the 7th inst., Mr. Rawdon Macnamara was re-elected, for the ensuing year, representative of the College at the General Medical Council.

SANITARY SCIENCE IN GERMANY.

III.

IN the last section of his work Professor Sander discusses the sanitary conditions that should be preserved in the house and in the street. The evils that have to be combated in the house are uncleanliness, overcrowding, want of light and air. Police measures against overcrowding, as in England, are, he admits, almost everywhere required, but, he adds, they should only be carried into effect when the demand for shelter has been met by the erection of new and good houses into which those may go who have been expelled from their old haunts. The duty of the public to provide proper accommodation for the people is strongly maintained by the communists, but it is, he says, quite obvious that it is impossible to carry this out in practice, for "who would build if every one expected the State to build for him?" Improvements for the poorer classes may, indeed, be gradually made at the expense of the wealthier, and in this way, he says approvingly, in England individual houses and even whole quarters of the town, which have sunk into such squalor as to be uninhabitable, are cleared off the face of the earth and replaced by wholesome dwellings; or, as in Hamburg, the State may become a landowner, and may supply the poor with good houses at easier rents. But neither of these methods quite affords a solution to the difficulty, for there must always be some authority which shall determine the need for building, the nature of the houses required, and the plan on which the extension of the town should be carried out. The construction of houses should, he thinks, be under the regulation of a police building authority, whose duty it should be to see that in the construction of new houses proper regulations for the admission of light and air are complied with, though considerable latitude should be allowed.

In regard to the improvement of old dwellings, the difficulties are very great, for since, in Germany, as in England, nothing can be done without compensation being given to the owner, most schemes of the kind are wrecked for lack of money. In France, by the "*loi relative à l'assainissement des logements insalubres*" of 22nd April, 1850, house-to-house inspection can be made, and in this way between the years 1851 and 1865 no less than 21,911 cases were dealt with, of which by far the greatest number (17,608) were excellently disposed of by the commission, the remainder being submitted to higher authority.

In regard to streets, the Munich division of the German Sanitary Union have determined that the width of great thoroughfares should not be less than thirty metres; of secondary streets, when of considerable length, twenty metres; and for short connecting streets, twelve metres. For the suburbs, the semi-detached villa is recommended, with a small fore-garden. Marshy places must be drained before any erection can be allowed. The best direction for streets is from south-east to north-west, or from north-east to south-west, because in this way each house obtains the largest amount of sun. Trees should be planted only in very wide streets, because they take away light, and, as a rule, are killed by escape of gas, earth appearing to have so little disinfecting power that an admixture of one volume of gas with thirty of earth still acts as a poison to the roots, and proves fatal to the tree, the toxic action being exerted even when the soil so contaminated has long been exposed to the air. On the other hand, all open spaces should be planted. The nature of the paving of streets is, Dr. Sander thinks, too little attended to; it should be hard, and not easily reduced to powder, and the spaces between the stones should be as narrow as possible. In Leipsic, where the spaces are very wide, and half the streets are thus unpaved, the street dust contains from 70 to 80 per cent., and on the promenade 93 per cent., of mineral constituents. Pavements made of flint, which retain feculent materials and decomposing sub-

stances, are very objectionable. The best he considers to be the New York macadam, or concrete pavement.

The distance of neighbouring houses should be such as to allow light to enter at an angle of 45 degrees, and all windows in sitting-rooms should have a height of at least 9 ft. No permanent occupancy of cellars should be permitted. Professor Schwabe, of Berlin, has shown by some interesting statistics that it exercises a distinct influence on mortality. Thus whilst the mortality of occupiers of the ground floors and of the first, second, and third floors varied from 21·6 to 22·6 per 1000 per annum, that of the cellar dwellers was 25·3. This mortality is exceeded by that of the occupiers of attics (28·2 per 1000), but this is due to the poverty of those who in that city take those rooms, whilst the inhabitants of the cellars belong to a much better class. The mortality is chiefly due to phthisis and diarrhœa. The evil effects of damp houses are well known, though no statistics have been compiled upon the subject. They appear to be due in part, as Pettenkofer has pointed out, to the interference with ventilation and the diffusion of gases which results from the closure of the pores of the walls, and partly to disturbances in the heat of the body that the moist walls exert from their cold temperature and better conducting powers. A municipal law of Berlin ordains that no newly-built house shall be occupied for at least nine months after its completion, so that time shall be given for it to become completely dry. There is some hardship in this, Professor Sander remarks, as some houses are much sooner dry than others, and it would be better to allow permission for occupancy when a certain grade of dryness had been attained. A considerable number of papers have been written detailing plans for determining the amount of water in the walls of a building, none of which appear to be free from large errors. Glässgen, a pupil of Pettenkofer, has, however, arrived at the conclusion from his researches that, so far as regards Munich, with its climate, building materials, and mode of construction of the houses, the walls should not contain more than 1 per cent. of water.

A section is devoted to hospital construction and management, which need not, the authors say, be injurious to the health of the sick, for though Tenon asserted in 1788 that no place in the globe was so unfavourable to life as the Hôtel Dieu, in Paris, yet the great American lazarettes of the war of the Rebellion, in which 1000 to 3500 were contained, showed a singularly small mortality, because due attention was paid to cleanliness and ventilation. He maintains, however, that Miss Nightingale is wholly in error in stating that cleanliness and ventilation will prevent the extension of infectious diseases. Measles, scarlet fever, dysentery, cholera, syphilis, and the itch require only separate wards; but small-pox, typhus, and puerperal fever require separate buildings, by means of which the intercourse of the attendants upon other sick people may be entirely prevented. He refers to the reports and statistics of the London Fever Hospital as showing that the accumulation of the patients suffering under a particular disease, as typhus, has no tendency to intensify the poison, if proper precautions are taken, and laughs at Simpson's statements to the contrary, as an instance of riding a hobby to the death. Professor Sander describes, but without passing any judgment upon, the corridor and the pavilion or block system. He considers that wards should be thirteen feet high, lower ones being insufficient for ventilation, or leading to draughts, and loftier ones presenting difficulties in warming. The beds should be one yard (surely too little) apart, eighteen inches from the wall, and have an area of eight square metres, and a cubic space of thirty-two cubic metres. The subject of hospitals is shortly discussed. Professor Sander then discusses the sanitary aspects of school life. He thinks the close of the sixth year is early enough for a child to begin school.

The last sections of the work are occupied with the consideration of prisons, churches, disinfection, quarantine, and vaccination. It will be seen from the extracts we have made that the subject of sanitary science or public health is attracting great attention in Germany, and that in some lines of inquiry into the causes of disease they have made great advances, though much, as Professor Sander admits, still remains to be done. There can be little doubt that by the application of theory to practice the greatest benefits will be obtained by the community at large, so that not only the average mortality will be diminished, but the health and comfort of the masses of the people will be steadily and largely increased. Professor Sander is a sound expositor, and we should think his work might be translated and published at a reasonable cost with advantage.

Correspondence.

"Audi alteram partem."

THE NERVOUS SYSTEM IN DIABETES.

To the Editor of THE LANCET.

SIR,—It is not our intention to enter upon any further discussion with Dr. Dickinson concerning the changes which he considers to be present in the nervous system in diabetes. We endorse most fully the concluding remarks of his communication in your columns of January 26th and February 2nd, that "the points in question are matters more for observation than argument. Time will bear its fruit." Unfortunately, however, as we think, Dr. Dickinson does not follow out that line, and if, as he says, we have murderously criticised him (we were not aware our attack was so deadly as Dr. Dickinson confesses to), he has in turn no less grievously misinterpreted us. Dr. Dickinson has not grasped the purport of our paper in the last volume of the Guy's Hospital Reports, nor placed our views fairly before your readers; and therefore we venture, with your permission (because many more will have read Dr. Dickinson's rejoinder than have read or will read our paper), to put ourselves right with both sides.

Dr. Dickinson, as is well known, has found in diabetes certain constant appearances, chiefly perivascular, which consist of dilatation of vessels, pigmentary changes, and disintegration of nerve-tissue. Upon these he founds the opinion that they constitute the "initial fact" in diabetes, or, to put it in his latest words, "they are enough at least to show the place of the storm."

We demur, first, to there being any constant morbid changes; and, secondly, to the significance Dr. Dickinson would attach to the appearances he has seen. The interest of the subject, and the inherent difficulties which track the investigator in his work amid the nervous tissues, made us think it desirable that similar observations should be repeated by others, while no one in England, so far as we are aware, had at that time done so. We had the material, and went deliberately to work over the same ground as Dr. Dickinson. We examined the nervous system in nine cases of diabetes, and we did not find morbid changes to the extent which Dr. Dickinson did; and those abnormal conditions that we did find we considered to be present in so many other conditions also, as to reduce their significance when present in diabetes. Dr. Dickinson admits that our specimens show a minimum of change; but then he says they look as if they had been made at hazard. By this he implies, we suppose, that other parts would have shown more. If so, he ignores our specimens entirely, and bases his argument solely on the changes observed in his own; for he has no right to infer, from the minimum change in those before him, that others from the same cases would have shown a greater. But it is not alone a matter of observation, it is one also of interpretation. We have nowhere said that Dr. Dickinson did not see certain things in diabetic cords which he considers abnormal; we mostly join issue with him when he says that all the bloodvessels were large as a result of disease, all the visible spaces so visible from morbid absorption, all the gelatinous material, nerve detritus, &c., products of nervous decay; when, in fact, he advances beyond the entrenchments of *facts* to the outposts of *opinions;* and, surely, he will not deny us the liberty of challenging any one of them. Is it so easy to recognise the origin of detritus? Is the course of events, so happily sketched in the passage from which we quoted in his original paper, so clearly proven as to admit of no possible modification? We also, with Dr. Dickinson, have spent much labour to little purpose if we have not learned with what caution the results of microscopic research should be received. We put it forward as our opinion, nothing more, that in our specimens we could see nothing sufficiently morbid to explain diabetes. We had seen similar appearances under such varied conditions other than diabetes both healthy and diseased. Dr. Dickinson need not take it so very unkindly that we differ from him. But nursing the mistake with which he sets out, he calls others to witness that we discredit their researches as well as his. This we certainly did not:

we merely pointed out that they had not been universally accepted, and asked for more observation and more positive light. We wish we could think, Sir, that Dr. Dickinson's latest contribution to your columns gave us that light. But he treats us so freely with innuendo that we much fear the discussion we hoped to raise will be rendered impossible by his menacing demeanour. Then, Sir, these "nihilistic pathologists," to whom considerations on the nature of gelatinous material "must seem as idle as speculations upon the anatomy of a ghost" (a very apt simile), who ignore them "as though no observations were to be accepted without a certificate from them"—these gentlemen, to whom "it is easy not to find," are rebuked for not examining the specimens from which Dr. Dickinson drew his conclusions. Clearly, from Dr. Dickinson's standpoint, it was a pity we did not, but inasmuch as we did not question the preparations, but the interpretations therefrom, where was the necessity? Our cases were more than enough to disprove constant changes, as one contrary fact is sufficient to negative a general statement.

Dr. Dickinson promises us an exhibition of specimens at the Medico-Chirurgical Society. We may, therefore, add, that to enable him to make his demonstration all the more crushing we shall be very pleased to place our specimens still further at his disposal on that occasion, and we beg to assure him that we are none the less open to other convictions because, with our present light, we incline to one.

We are, Sir, yours faithfully,

FREDERICK TAYLOR.
JAMES F. GOODHART.

Feb. 11th, 1878.

THE STUDY OF NATURAL SCIENCE AND MEDICINE AT CAMBRIDGE.

To the Editor of THE LANCET.

SIR,—Among the recent changes which have contributed to facilitate the pursuit of natural science and medicine at Cambridge, and the obtaining degrees in medicine and surgery, is the regulation permitting the "Previous Examination" in classics and mathematics to be passed in the first term of residence, so that the student who can accomplish this is enabled to devote all the remainder of his time in the University to natural science and medicine. Many of those who came up last October, all those who were well prepared to come up, took advantage of this regulation, and are now at work at chemistry and the other preliminary medical subjects. I would be glad to call attention to a further step which has been taken in the same direction by a regulation permitting the examination in classics and mathematics to take place, through the Cambridge Senior Local Examination, or the Higher Local Examination, or the Oxford and Cambridge Schools Board Examination, before the University course has commenced. Thus the student may obtain the requisite certificates (the certificates which are accepted in lieu of the Previous Examination), may register as a medical student, and may, immediately on coming to the University, and through the whole time of his residence, devote himself to natural science and medical subjects. He has the advantage of commencing when the courses of instruction, for the most part, begin—viz., in October, and he can obtain his degree in medicine at an earlier period. The examinations for these certificates are probably somewhat more difficult than the Previous Examination, and demand a good knowledge of the subjects required, not more, however, than a lad who has been well trained at school should be able to show at the age of seventeen, which is a very good age to come to the University. Any period which may intervene between the obtaining the requisite certificates through one of these examinations and the commencement of the residence at the University will be well spent in the study of physics, chemistry, or botany.

Information respecting these examinations, the Previous Examination, and other points, may be obtained through the "Student's Handbook to the University of Cambridge," published by Messrs. Deighton, Cambridge, price 1*s.* 6*d.*

By taking the course thus suggested, the well-educated, industrous student may very well, and at moderate expense, pass through the University and obtain the B.A. and M.B. degrees by the age of twenty-two.

Yours, &c.,

G. M. HUMPHRY.

Cambridge, Feb. 9th, 1878.

THE BRITISH MEDICAL ASSOCIATION AND WOMEN MEMBERS.

To the Editor of THE LANCET.

SIR,—I am not surprised at this question being raised by Dr. Wilson Fox in your issue of the 2nd inst. My only wonder is that it has not been mooted before, and professional attention directed to the very remarkable inaction of the Council of the British Medical Association, in the face of the expressed sentiment of their members as recorded in the vote taken at Sheffield in 1876.

At Edinburgh, in the previous year, there appeared to me a very unmistakable feeling on the subject, if I may judge from the approbation with which my resolution of "Instruction" was received by a meeting of the most representative character, held in the most active centre of medical life, thought, and progress. The resolution was as follows:—"That it be an instruction to the Secretary, between now and the next annual meeting, to issue a circular addressed to every member of the Association, requesting an opinion, yes or no, as to the admission of female practitioners to membership." The result of this circular was—Noes 3072, ayes 1051.

I was unable to attend the meeting at Sheffield, as was also the seconder of the "instruction," Dr. Marshall, but surely this did not prevent the Council offering a resolution on the subject as a natural outcome of the vote. The resolution I should have deemed inevitable under such circumstances would have been to the effect that—"It appearing that a majority of 2000 of the members of the British Medical Association do not desire women to be admitted as members, resolved that for the future no female members of the medical profession be eligible as candidates for admission to this Association." I am inclined to think that a resolution of this kind will yet commend itself to the profession, thereby putting an end, by no means untimely, to the indecent exhibition of women at medical meetings of men, as well as to that under-current of support which the "woman-doctor venture," in all its immodesty, has received within the ranks of the executive of the Association itself.

I am, Sir, yours faithfully,

OLIVER PEMBERTON.

Birmingham, February 12th, 1878.

LIVERPOOL.

(From our own Correspondent.)

A DEATH during chloroform administration has occurred in the Northern Hospital. Michael C——, aged forty-one, a sailor, had received an injury on shipboard to one eye, destroying sight. Sympathetic irritation becoming manifest in the remaining eye, extirpation of the injured globe was advised. Chloroform was administered by Mr. R. H. Jones, house-surgeon, on Thursday, Feb. 7th, for the operator, Dr. Macfie Campbell. The patient was not fully under the influence of the anæsthetic, and the operation was not commenced, when his breathing was observed to fail, and in spite of prompt employment of artificial respiration, &c., he died from failure of the heart's action. The autopsy was conducted by Dr. Davidson, who gave evidence at the inquest that to the naked eye the heart appeared healthy, but that microscopic examination showed the commencement of fatty degeneration. The jury found that "the deceased had died from failure of the heart's action consequent upon the administration of chloroform, the said administration having been skilfully and judiciously applied."

Two vacancies for surgeons are declared at the Royal Southern Hospital, one due to the resignation of Dr. Nottingham, who has filled the office for twenty-one years; the second has arisen under somewhat peculiar circumstances. At a recent meeting of the trustees a rule was passed entitling the surgeons to hold office until attaining the age of sixty, instead of limiting the tenure to twenty-one years, as at present. Immediately after the passing of the resolution Dr. Wollaston, who has held office about ten years, tendered his resignation. The candidates at present in the field are Messrs. Little, Pugh, Ransford, and Pendleton.

February 12th, 1878.

Obituary.

JAMES BLUNDELL, M.D.

THE links that connect this generation of medical practitioners with that to which Cline and Astley Cooper, Babington and Bell, Halford and Hall, Latham and Lawrence, Stanley and Saunders belong, are both few and fragile. Dr. James Blundell, who died at his residence in Piccadilly on the 15th of last month, at the advanced age of eighty-seven, was one of the very few remaining in our day who had stood side by side in the professional rank with those illustrious men. Dr. Blundell was even older in professional status than in years, his rare abilities, untiring industry, and his large social influence, having placed him in an eminent position at a very early age. Having for many years previous to his decease almost entirely withdrawn himself from professional intercourse, he was only known by name and reputation to the majority of the younger race of medical men. His retirement from Guy's Hospital, where for nearly twenty years he lectured on physiology and midwifery, took place at a period so remote that many who are now advanced in years can scarcely remember it. The important share which, fifty years ago, he took in the advancement of physiology and obstetrics is but little known, and certainly not adequately appreciated. In the following notice we shall point out some of Dr. Blundell's important discoveries, and endeavour to set forth the influence which they have had on the science and practice of medicine in this country.

Dr. Blundell was born in London on Dec. 27th, 1790. His scholastic education was mainly entrusted to the Rev. Thomas Thomason, M.A. Cantab., who grounded him well in the classics, while his professional education was obtained chiefly at the Southwark united hospitals of St. Thomas and Guy's, where he had for teachers Sir Astley Cooper and Mr. Cline, Dr. Babington, Dr. Cholmeley, Dr. Marcet, and Dr. Haighton, his maternal uncle, with whom he resided for many years, and by whose influence and example he was chiefly incited to the study of physiology and obstetrics, in both of which he afterwards became distinguished.

From the united hospitals Dr. Blundell went to Edinburgh, where he attended the classes of Dr. Munro, the Drs. Duncan, senior and junior, Dr. Home, Dr. Rutherford, Dr. Hamilton, Dr. Hope, Dr. Gregory, and Mr. Fyfe. At Edinburgh he also gave considerable attention to the study of botany and medical jurisprudence, then almost neglected in the London schools. He graduated at Edinburgh in June, 1813, and took for his inaugural thesis the subject, *De sensû quo melos sentitur*, in which he endeavoured to prove what has since been established, that the senses for music and of hearing are distinct, though dependent. In 1814 he returned to London, and although only twenty-four years of age, began to lecture in conjunction with his uncle, Dr. Haighton, on midwifery; and two or three years later commenced a course of lectures on physiology. He was admitted a licentiate of the Royal College of Physicians in 1818, and about the same time succeeded Dr. Haighton as Lecturer upon Physiology and Midwifery in the united schools of St. Thomas's and Guy's Hospitals. His lectures were attractive and popular. Of the domain of physiology he took a wide view, and made it to embrace much that is now relegated to other departments of science. A diligent worker and unwearied investigator himself, he always endeavoured to awaken within his pupils the spirit of inquiry and research. "Think for yourselves," was a lesson he ceaselessly inculcated. Personal and independent observation and examination of alleged facts he regarded as absolutely necessary for the attainment of all real knowledge. "In religion, faith is essential; in physiology, a philosophical scepticism" expressed, he thought, the attitude of the intellectual worker.

Dr. Blundell was an uncompromising advocate for the liberty of physiological experimentation. Indeed, without experimental appeals to living animals he could not have elucidated the subject which made him famous, and with which his name must ever be associated—namely, the transfusion of blood. The arguments which he advanced in favour of liberty in physiological research were complete and unanswerable. In reference to experiments upon living animals for the investigation of physiological truths, he says: "Is not pain daily and hourly inflicted on the inferior animals to contribute to the support or pleasure of man; and shall it be fastidiously objected to when inflicted for the purpose of advancing physiological and medical knowledge? ..... Of what importance is it now to mankind whether Antony or Augustus filled the imperial chair? and what will it matter, a few centuries hence, whether England or France swept the ocean with her fleets? But mankind will always be equally interested in the great truths deducible from science, and in the inferences derived from physiological experiments. The fact that life may be saved by the transfusion of blood into the veins will be as beneficial a thousand years hence as it is at this day. I will ask, then, whether the infliction of pain on the lower animals, in experiments, is not justified by the object for which those experiments are instituted—namely, the advancement of physiological knowledge?"

In 1825 Dr. Blundell published a volume of "Researches, Physiological and Pathological." In this work, as also in his papers read before the Medical and Chirurgical Society in 1823, he showed, by appeals to experiments, chiefly upon rabbits, that the dread of injuring the peritoneum had been greatly exaggerated, and he advocated a bolder practice in abdominal surgery. Since then the correctness of his views has been abundantly confirmed. The removal of ovarian tumours, the operation of gastrotomy for intussusception, obstruction of the bowels, adhesions, hernia, &c., are amongst the chief glories of modern surgery, and prove that the peritoneum, if properly managed, is ever a tolerant structure. Dr. Blundell himself successfully removed the uterus for malignant ulceration on February 12th, 1828. The patient lived comfortably for nearly a year, became plump, and enjoyed excellent health. She died on February 7th, 1829, from enteritis following constipation, produced mechanically from constriction and altered position of the bowel. An account of the operation will be found in THE LANCET for 1828. Dr. Blundell had three other cases, but they were of a hopeless nature, and were not successful. In the second part of the volume of Researches, which treated of Generation, Dr. Blundell proved that the corpus luteum is not, as hitherto had been supposed, necessarily an evidence of female impregnation, as it has been found in cases where complete conception has not and could not have taken place. An account of the experiments on the subject, which were completed in the year 1819, will be found in the tenth volume of the Medico-Chirurgical Transactions.

The third portion of the work is the most important and interesting, and relates to transfusion of blood. From experiment, Dr. Blundell had found that blood may be safely transferred from one animal into another, provided it be of the same species. By an elaborate process of reasoning, and from further experimentation, he convinced himself that the ancient process of transfusion might be safely employed in fit cases upon the human subject, and that venous blood would revive or resuscitate almost as well as arterial. In 1818 he performed his first operation tentatively upon a man in Guy's Hospital, who was dying from inanition induced by malignant disease of the pylorus. Considerable temporary benefit followed the introduction of the blood, but, as was to be expected under such circumstances, the man, after some hours, sank again into a state of exhaustion, and died fifty-six hours after the operation. Though only temporarily successful, the case served to establish the safety of the operation and to show that, under less disadvantageous circumstances, it was likely to be followed by more favourable results. In August, 1828, Dr. Blundell had the satisfaction of operating successfully on a woman who was sinking from post-partum hæmorrhage; and he was again successful in November, 1825, in a case of asphyxia from uterine hæmorrhage. The blood was in this instance supplied by Dr. Unwins and Mr. Wright, the lady's medical attendants. Thirteen years afterwards the patient was living. Dr. Blundell performed the operation on many other occasions, in nearly half of which he was successful.

In the years 1827–8 Dr. Blundell's elaborate and learned lectures, "The Theory and Practice of Midwifery," made their appearance in THE LANCET. They were afterwards collected and edited by Dr. Castle, and published in 1834 under the title of "The Principles and Practice of Obstetricy." The work took at once a good position, which it steadily kept for some years. In 1834, to the great regret

of all his pupils, Dr. Blundell gave up the lectureship on midwifery at Guy's, with which he had been associated for nearly twenty years, and withdrew his connexion from the hospital in consequence of the treasurer appointing and advertising a gentleman as a colleague in the chair of midwifery without Dr. Blundell's sanction or approval. Dr. Blundell carried with him the sympathies of his professional brethren, and for some years after this event he was known as an eminent and successful obstetrician and gynæcologist. Many years ago he retired from active practice, and sought in his old age that ease and dignity which his distinguished services had won. He was honoured with a place in Pettigrew's Medical Portrait Gallery, which contains a long biographical notice, to which we are largely indebted for many of the above facts.

DR. FLEETWOOD CHURCHILL.

IT is with great regret that we have to announce the death, in the seventieth year of his age, of one long and honourably known to us all, Dr. Fleetwood Churchill. The melancholy event took place on the 31st of last month, at Ardtrea Rectory, in the county Tyrone, the residence of his son-in-law, where he had been residing since his retirement from the practice of his profession, some four years since. In large practice at the time, in the full enjoyment of his great intellectual faculties and of the confidence of the public and of his professional brethren, he was compelled to give up work in consequence of a most painful affection of the hip-joint, the result of chronic rheumatic arthritis, the disease so ably described by his old friend, and, it may be added, fellow-sufferer also, Robert Adams. From that time he lived in complete retirement, surrounded, however, by several members of his family, and cheered and comforted by their loving care and sympathy.

Fleetwood Churchill was an Englishman by birth, having been born in Nottingham, where, at an early period, he resolved to devote himself to the study of medicine, and, with that object in view, overtures were made to the celebrated Mr. Higginbotham to take him as a pupil. This gentleman's list, however, was full, and the negotiation failed. Subsequently he studied in Edinburgh, where he took his first medical degree in 1831, and then proceeded to Dublin to study midwifery, in which city he ultimately took up his permanent residence, influenced, no doubt, by the fact of his having, at an early age, won the affections of a most amiable and accomplished lady, daughter of one of the leading merchants in that city, who subsequently became his wife and the joy of his existence.

Entering upon the practice of his profession, he at once resolved to devote himself specially to obstetrics, and with that object in view, in conjunction with the late Dr. Speedy, he established the Western Lying-in Hospital, a maternity on rather a small scale, but where he speedily attracted round him an enthusiastic body of students, each one and all of whom revered him as a friend and as a teacher. Shortly after that he published his first work, "The Theory and Practice of Midwifery," which has subsequently run through many editions, and which is still a standard work upon the subject of which it treats. Henceforward his reputation steadily increased, his practice became more lucrative, and honours poured in upon him. He was appointed Professor of Midwifery in the School of Physic, in succession to the late celebrated Montgomery; he was elected president of the College of Physicians, and on more that one occasion president of the Obstetrical Society. The University of Dublin also conferred upon him their M.D. degree "honoris causa," and few were the foreign obstetrical societies that did not enrol his name amongst their honorary fellows. Whilst thus engaged he found time to add to his literary reputation by the publication of such standard works as "Diseases of Women," "Diseases of Children," "Manual for Midwives and Monthly Nurses," and many important contributions to the several medical journals. Anyone consulting his works must be struck by the vast amount of research displayed in them. Every author of any repute upon the question under consideration is quoted, and impartial justice is rendered to his labours. Indeed, if there be a fault to be found with his writings, it would be their *embarras de richesse* in this respect. Were it necessary to adduce evidence as to the great value of his works, it would be found in the fact that they have been reproduced in America, and translated also into several continental languages. He was the translator of a valuable series of papers on Puerperal Fever for the Sydenham Society in 1849. At the meeting of the British Medical Association at Norwich in 1874, he was chosen president of the Obstetrical Section, but from failing health he was unable even to attend the meeting. The address which he had prepared on the hygiene of the lying-in hospitals was, however, delivered by the vice-president, and attracted much attention.

Besides his professional labours Dr. Churchill was well abreast of the current literature of the day, and took a keen interest in questions of general science and of theology. Among his friends he was known as an ardent supporter of foreign missions, the hospitable friend of missionaries, and better acquainted with the history and work of the Church abroad than almost any of his contemporaries. When the Church Congress was held in Dublin in 1868, he was selected to read a paper on "The American and Canadian Churches, their organisation and practical working." That paper struck all who heard it as very remarkable, not only for its research and accuracy, but for the calmness and foresight which it displayed in prospect of the altered conditions then coming on the Church of Ireland. When the Act of Disestablishment was passed no Irish layman assisted more than Dr. Churchill did towards the arduous work of reorganisation. On this and on the financial arrangements of the Church he contributed some valuable papers and pamphlets, which were largely used and referred to by the Church Representative Body, by whom Dr. Churchill was gladly welcomed into council on these questions. Not merely with pen, but largely and generously with purse also did he contribute. But those who knew him most intimately knew best how his Christian modesty of character would shrink from praise in such a matter. His life was an example of an unostentatious, practical Christianity, a living lesson of religion pure and undefiled. Its governing principle was Christian duty, and its closing years exemplified the psalmist's words—"Mark the perfect man, and behold the upright; for the end of that man is peace."

CLAUDE BERNARD.

ONE of the brightest luminaries of science has just disappeared, and experimental physiology has lost in Claude Bernard one of its most illustrious representatives. Not only France, but the scientific world at large, will mourn this loss. The name of Claude Bernard is known wherever a book of physiology is read, and will descend to the most remote posterity. He was a man of rare penetrating genius and great powers of observation. The results of his labours are universally known and admired, even when criticised. His life as a *savant* was full of honours and well-deserved satisfaction, and his social career was one of unrivalled success. In the Collége de France, in the Institute, in the French Academy, in the Academy of Medicine, in the Senate of his country, he stood as the highest representative of French science. His death is considered a public loss in France, and the Chambers voted that his funeral should be a national ceremony.

Claude Bernard ended this life on Sunday last about ten o'clock. He had been ailing some time from a disease of the kidneys, which rather suddenly took a bad turn, and carried him off at the age of sixty-five, when he was intent as ever on his labours and his search after new truths. He was born in 1813 in a small village near Lyons, and, like so many other *savants* who have risen to the highest distinction, he began life in very modest circumstances. After a first course of education he was soon obliged to seek some means of livelihood, and was apprenticed to a pharmacien, or chemist, of Lyons. He began his scientific career by rinsing phials and making up compounds in a back store. Of course, he soon got disgusted with the monotony and drudgery of this existence, and one day left for Paris to seek his fortune.

His main hope at that time—the one on which he based his boyish and exalted dreams of success in Paris—was a tragedy in five acts, which he carried about in his pocket. This tragedy he showed to Saint Marc Girardin, the famous academician and man of letters, to whom he had a letter of introduction, and who strongly advised Claude

Bernard to eschew letters and tragedy-writing, and to betake himself to science. Claude Bernard followed this advice, and it may be to this chance event the world was indebted for a physiologist of the first order instead of a mediocre versifier.

In 1839, at the age of twenty-six, we find Claude Bernard in the Paris hospitals, filling the post of house-surgeon, exerting his remarkable powers as an observer, but still without any distinct aim or ambition. It was in 1841 that the turning event of his life took place, when the celebrated Magendie engaged him to help him as an assistant in his laboratory of the Collége de France. The field of experimental physiology which Magendie was so brilliantly clearing became open to him. Another physician and patron of eminence, Rayer, encouraged his exertions at this stage, and in 1843 he took his degree of Doctor of Medicine. Claude Bernard continued his labours and researches in Magendie's laboratory, which afterwards became his own, where so much valuable work has been done, notwithstanding its narrow precincts and sad deficiencies, and where he has brought up pupils who have since become masters in Germany, England, and elsewhere.

And yet, strange to say, until 1853, until the age of forty, Claude Bernard hesitated as to the career which he should definitely adopt. His tastes attracted himself as strongly to practical surgery as to the cultivation of pure science, though in 1849 he had carried off the grand prize of experimental physiology for his work on the pancreas. But in 1853 he made up his mind. He had appointed this age as an extreme limit for forming a determination, and in that year he ended his indecision by brilliantly taking his degree of Doctor of Sciences at the Sorbonne.

From that moment honours began to flow in upon him, and the authorities of his country, as well as his scientific *confrères*, vied with each other in the desire to acknowledge and recompense his brilliant labours and unrivalled reputation as a physiologist. In the same year, 1854, he was elected a member of the Institute (Academy of Sciences), and nominated Professor of General Physiology at the Sorbonne. In 1855 he was nominated Professor of Experimental Medicine at the College of France, in the chair of Magendie, for whom he had officiated since 1847. In 1861 he was unanimously elected Member of the Academy of Medicine. In 1867 the Emperor nominated him Commander of the Legion of Honour. In 1868 he left the Sorbonne to take possession of the chair of General Physiology at the Museum of Natural History. That same year he was elected a member of the French Academy as the successor of Flourens, a rare distinction which is seldom accorded by this renowned body of literary men, the "immortal forty of French letters." He was selected not only on account of the glory of his name, but on account of the perfection of his style—correct, sober, "nervous," incisive, and yet classical. In 1869 he delivered at this celebrated academy his inaugural speech, the "solemn discourse of the reception day," which is always an event in Paris. He then read his famous discourse on the experimental method, which caused a great sensation, and was the subject of a violent and protracted controversy in the scientific and literary press of France. That same year, 1869, the Emperor, as the crowning reward of a scientific career full of glory and success, nominated him a Senator of the Realm, an appointment which met with immense approbation and applause.

Of course it would be impossible in this short notice even to enumerate the scientific productions, the books, the researches, the pamphlets, the lectures, the thousand articles, which comprise the work of Claude Bernard. Every physiologist, every reader of medicine and science, is acquainted with his researches on the nervous system, the phenomena of life, the action of poisons, the functions of the pancreas, the functions of the liver, the vaso-motor system, recurrent sensibility, the functions of the cranial nerves, &c. Besides his most recent lectures or papers published in the *Annales de l'Académie des Sciences*, *l'Revue des Cours Scientifiques*, &c., we may just give the titles of his major productions: "Leçons de Physiologie Expérimentale," "Leçons sur les Substances Toxiques et Medicamenteuses," "Leçons sur la Physiologie et la Pathologie du Système Nerveux," "Leçons sur les Propriétés des Tissues Vivants," &c.

Claude Bernard was no orator. At the beginning of every one of his lectures there might be observed a slight hesitation in his speech; but he soon became clear and correct, expressed his thoughts as he wished to do, and conveyed them in a clear and concise manner. At times he became even eloquent, when his enthusiasm ran away with him, and, as it were, threw him off his guarded attitude. He was not only a great but a scrupulously careful observer; weighing facts well; sifting language carefully; measured, methodical, and orderly in all he did—in his experiments, in his lectures, in private conversation. He seemed always solemn and self-composed; and whether in a drawing-room, or at his lectures, or at his dissecting-table, he wore the air of a pontiff, and had a look and demeanour which at once commanded respect, and revealed a man of extraordinary intellectual power and authority. He retained his vivacity to the last. His private life was characterised by great dignity and modesty. He was poor, and remained poor, because, it is said, he had undertaken to pay the debts of his parents. He showed in his personal character both great firmness and great goodness. He always took a high standpoint in judging men and things; and we can conclude this article by saying that he was revered and loved by all who approached him.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the required examination, received their diplomas in Dental Surgery at a meeting of the Board of Examiners on the 12th inst.:—

Alexander, Adolphus Benjamin, Hatton-garden.
Clements, Thomas, Colville-road.
Fort, James W., Lancaster.
Gillies, David, Londonderry.
Gurner, John Robert, Brussels.
Hardie, Walter Jackson, Montrose.
Rodway, Leonard, Torquay.

Two candidates failed to satisfy the Board, and were referred.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Feb. 7th:—

Dasilva, Pascal Manoel, Tavistock-street, Bedford-square.
Gledhill, James, Pearl-crescent, Waterloo-road.
Jeram, James William, Waterlooville, Hants.
Landon, Alfred Austen, Maidstone, Kent.

The following gentlemen also passed the Primary Professional Examination:—

Fredk. Thomas Good, St. Bartholomew's Hospital; William Williams, St. Thomas's Hospital.

THE will of Dr. James Blundell has been proved under £350,000.

DR. ELLIOTT, one of the leading practitioners of Calcutta, and principal of the General Hospital there, has died from cholera after nine hours' illness.

THE meeting of the Belfast Branch of the Royal Medical Benevolent Fund Society of Ireland was held at Belfast on the 6th inst., under the presidency of D. T. H. Purdon.

VACCINATION GRANT.—The following gentleman has received the Government grant for successful vaccination in his district:—Mr. T. Torkington Blease, Altrincham, £28 3s. (third time).

NORTHAMPTON GENERAL INFIRMARY.—In pursuance of a recommendation by the medical staff, it has been decided to appoint a second doubly qualified resident medical officer at £80 per annum.

POOR-LAW SERVICE.—The Poole Guardians have increased the salary of Dr. Hatton Smyth, medical officer for the Canford district, from £60 to £80 per annum. The salary of Dr. Kelly, medical officer to the Mullingar Dispensary district, has been increased from £120 to £130 per annum. The Blackburn Guardians have increased the salary of Dr. John Grime, medical officer to the workhouse, from £80 to £140 per annum.

SCHOLARSHIPS IN NATURAL SCIENCE.—An Examination for a junior scholarship in Natural Science will be held in Downing College, Cambridge, on Tuesday, the 14th of June next, and the three following days, and will begin at 9 A.M. on Tuesday. This examination will include (1) Chemistry, with analysis of simple salts. (2) Physics—electricity, light, heat. (3) Physiology. Papers will also be set in (4) Comparative Anatomy, and (5) Botany. No candidate will be examined in more than three of these five subjects,

whereof two at least must be in the former group. The junior scholarships will be of the value of from £40 to £70 per annum, and tenable for two years, or until the holder is elected to a foundation scholarship. Further information will be given by John Perkins, Esq., or the Rev. J. C. Saunders, tutors of the College.

SOCIETY OF PUBLIC ANALYSTS.—At the next meeting of this Society, to be held on the 20th inst., at 8 o'clock, at Burlington House, Piccadilly, the following papers will be read:—"On the Fatty Metamorphosis of Caseine in Milk and Cheese," by A. W. Blyth, M.R.C.S.; "On an adulteration of Milk which cannot be detected by the ordinary process of Analysis," by J. Muter, Ph.D.; "On the numerical scale for the estimation of the degree of contamination of Drinking Waters, as shown by the results of the Analyses," by G. W. Wigner, F.C.S.; "Experiments on the chemical action of Chlorate of Potash on the system," by Otto Hehner, F.C.S. The reply of the Somerset House chemists to the resolution of the Society, passed at the last meeting, will also be brought before the members.

Medical Appointments.

ALFORD, H. J., M.D., has been reappointed Medical Officer of Health for the Taunton Rural Sanitary District, at £100 per annum for five years and £100 per annum for expenses for the first two years.

ASBURY, E. J., L.R.C.P.Ed., M.R.C.S.E., has been reappointed Medical Officer of Health for the East Retford Rural Sanitary District, at £100 for one year.

ATKINS, R., M.D., C.M., has been appointed Resident Medical Superintendent of the Waterford District Lunatic Asylum, vice Connolly, deceased.

BALBIRNIE, J. P., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer to the Foresters' Friendly Society, Dalton-in-Furness, vice Clarke, resigned.

BARRY, F. W., M.D., C.M., S.S.C., has been appointed Medical Officer of Health for the Haworth, Oakworth, Oxenhope, Silsden, and Skipton Urban, and Keighley, Settle, and Skipton Rural Sanitary Districts, at £400 per annum for three years.

BLUMER, W. P., L.R.C.P.Ed., L.R.C.S.Ed., has been promoted to Senior House-Surgeon, Sunderland Infirmary, vice Ransom, resigned.

BRUNTON, W. R., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer and Public Vaccinator for the Sydenham District of the Lewisham Union, at £70 per annum and fees, vice Hunt, resigned.

CARTER, W., M.B., B.Sc., LL.B., has been appointed Lecturer on Materia Medica at the Liverpool Royal Infirmary School of Medicine, vice Nevins, resigned.

DEARSLEY, H. H., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for No. 10 District of the Croydon Union, vice Lloyd, resigned.

DOMVILLE, E. J., L.R.C.P.L., M.R.C.S.E., has been appointed a Surgeon to the Exeter Lying-in Charity, vice Phelps, resigned.

ENGLAND, R. E., M.D., has been appointed House-Surgeon to the Dover Hospital and Dispensary, vice Poynder, appointed House-Surgeon to the Royal Portsmouth &c. Hospital, at £100 per annum, furnished apartments, board, &c.

GABE, Mr. J. (of the London Hospital), has been appointed Resident Medical Officer *pro tem.* to the Queen Adelaide Dispensary, Bethnal-green-road, vice Butler, appointed Assistant Medical Officer to the Workhouse, St. Matthew, Bethnal-green.

GEORGE, H., M.D., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Horncastle Urban Sanitary District, at £40 per annum for five years.

GRIMSHAW, T. W., M.D., F.K.Q.C.P.I., has been appointed Consulting Physician to the Cork-street Fever Hospital, Dublin, on the expiration of his fourteen years' term of office as Physician.

JAMES, D., M.D., F.R.C.S.Ed., has been appointed Certifying Factory Surgeon for Sale, Cheshire, vice Larmuth, resigned.

MCALISTER, J., L.F.P.S.G., has been appointed Medical Officer to the St. Marnock Lodge of Odd Fellows, Kilmarnock, for the ensuing year.

MACREIGHT, W. W., M.D., M.R.C.P.L., M.R.C.S.E., & L.M., has been appointed a Consulting Physician to the Torbay Hospital and Provident Dispensary, Torquay.

MASON, H. W., L.R.C.P.L., M.R.C.S.E., has been appointed House-Surgeon to the Durham County Hospital, vice Sworder, resigned.

MITCHELL, T. A., L.R.C.S.I., has been appointed Assistant Visiting Surgeon for Woolwich, under the Contagious Diseases Acts (Women).

MONTGOMERY, T. L., L.R.C.P.Ed., F.R.C.S.Ed., has been appointed Medical Officer to the Workhouse and the Penrith No. 1 and Greystoke No. 1 Districts of the Penrith Union, at £60 per annum and fees, vice Macgregor, resigned.

O'REILLY, Dr. G. J., has been appointed the substitute of Mr. A. A. H. Knight, the Medical Officer for the Keswick District of the Cockermouth Union, to act during illness or occasional absence.

PEARSE, W., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer and Public Vaccinator for the No. 7 District of the Bodmin Union, vice Gaved, resigned.

RAYNER, J., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed a Medical Officer to the Warwick Dispensary and Cottage Hospital.

ROBERTSON, W., M.B., C.M., has been appointed Medical Officer and Certifying Factory Surgeon for Buckhaven, vice J. A. Robertson, M.D., resigned.

ROE, R. G., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer, Public Vaccinator, &c., for the Carney No. 1 Dispensary District of the Sligo Union, vice Hamilton, resigned.

SAUNDERS, C. E., M.D., has been appointed Medical Officer of Health for the St. Albans Urban Sanitary District, at £50 per annum.

SMITH, A., M.D., F.K.Q.C.P.I., has been reappointed King's Professor of Materia Medica and Pharmacy in the School of Physic in Ireland for seven years from the 12th of May next.

SMITH, G., M.D., M.R.C.P.L., has been appointed sixth Assistant-Physician to the London Hospital.

STODDART, W. W., F.C.S., has been appointed Public Analyst for Bridgewater.

SUTHERLAND, C. J., L.R.C.P.Ed. & L.M., has been appointed Medical Officer to the South Shields Police Force, vice Coward, resigned.

THAIN, L. L., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer and Public Vaccinator for the Longtown District of the Dore Union, at £75 per annum and fees; and Medical Officer of Health for the Longtown Sub-district of the Dore Rural Sanitary District, at £17 per annum, vice Price, resigned.

TOMKINS, H., M.D., M.R.C.S., has been appointed Senior House-Surgeon to the Manchester Royal Infirmary, vice Richmond.

WEST, S. H., M.B., M.R.C.P.L., has been appointed an Assistant-Physician to the City of London Hospital for Diseases of the Chest, Victoria-park, vice Evans, resigned.

Births, Marriages, and Deaths.

BIRTHS.

FELCE.—On the 11th inst., at Elgin-road, St. Peter's-park, the wife of Stamford Felce, M.R.C.P.Ed., of a son.

MILLER.—On the 9th inst., at Percy-circus, the wife of John Alexander Miller, M.R.C.S.E., of a daughter.

O'CONNOR.—On the 4th inst., at Camden-place, Cork, the wife of Denis C. O'Connor, L.R.C.P.Ed., of a daughter.

RAMSAY.—On the 5th inst., at York, the wife of James Ramsay, M.D., of a daughter.

WIGMORE.—On the 11th inst., at Inverness-terrace, Hyde-park, the wife of William Wigmore, M.R.C.S.E., of a son.

WILLIAMS.—On the 9th inst., at Norwich, the wife of Charles Williams, F.R.C.S.Ed., of a son.

WILSON.—On the 7th inst., at Marlborough-crescent, Newcastle-on-Tyne, the wife of William Teesdale Wilson, M.D., of a daughter.

MARRIAGES.

LAWTON—BROWN.—On the 12th inst., at All Saints' Church, Hoole, Chester, by the Rev. David Long, M.A., Vicar of St. Andrew's, Croydon (uncle of the bride), Herbert Alfred Lawton, L.R.C.P.L., M.R.C.S.E., of Poole, Dorset, to Nessie Margaret, elder daughter of the late Edward Acton Brown, Esq., of Flookersbrook, Chester.

MCCULLOCH—WILLIAMS.—On the 31st ult., at the Parish Church, Bettws-y-Coed, Latham Blacker McCulloch, F.R.C.S.Ed., to Hannah, daughter of the late Evan Williams, Esq.

DEATHS.

BLEECK.—On the 4th inst., at Warminster, Charles Bleeck, Surgeon, aged 72.

BOUCHIER.—On the 30th December, at Limerick, John Bold Bouchier, L.A.H.D., aged 58.

BRIERLEY.—On the 29th ult., at Dukinfield, John B. Brierley, L.F.P.S.G., aged 46.

DAVIES.—On the 21st ult., at Cardigan, Dr. Owen Davies, aged 45.

PAYNE.—On the 22nd ult., at St. Leonards-on-Sea, George Payne, M.R.C.S.E., aged 31.

PINKERTON.—On the 7th ult., at Erzeroum, John Pinkerton, M.B., C.M., aged 24.

PORTER.—On the 3rd inst., at Peterborough, William George Porter, Surgeon, in practice prior to 1815, aged 87.

SMYTH.—On the 13th ult., at Queenstown, Henry Goodrick Smyth, L.R.C.P.Ed., aged 27.

THWAITES.—On the 4th inst., at Bishop-Auckland, Thomas Bowe Thwaites, M.R.C.S.E., aged 58.

TIBBITS.—On the 10th inst., at Eldon-place, Bradford, Yorks, Charlotte Bankes, the wife of Edward T. Tibbits, M.D., in her 39th year.

WICKHAM.—On the 5th inst., at Clapton, Edgar Wickham, M.R.C.S.E.

[N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*]

BOOKS ETC. RECEIVED.

Dr. W. Mortimer-Granville: Minds and Moods.
J. Styrap: Code of Medical Ethics.
The Veterinary Journal. February.
Transactions of the Odontological Society of Great Britain.
Dr. Sims: Battey's Operation.
Rev. D. Morris: Annotated Poems.
W. Pole: The Life of Sir William Fairbairn.
J. Hawkins: Phases of Modern Doctrine.
Dr. Billroth's Surgery. Vol. II.
Dr. Dobell: Reports on Diseases of the Chest.
The Dublin Journal of Medical Science. February.
The Contemporary Review. February.
The British Journal of Dental Science. February.
Cassell's Great Industries of Great Britain. Part I.
Dr. James More: A Lay Sermon on Clubs and their Doctors.
Dr. Ogston: Lectures on Medical Jurisprudence.
S. Gamgee: The Treatment of Wounds.
The Gardener's Chronicle. January.
Mr. J. R. Godlee: Atlas of Human Anatomy. Part III.
A Few Rules of Medical Etiquette.
Dr. Prosser James on Laryngoscopy.
F. Hill: The County Franchise Difficulty—how Removable

METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Stewart's Instruments.)

THE LANCET OFFICE, FEB. 14TH, 1878.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Wet Bulb	Dry Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Feb. 8	30·65	S.W.	..	30	..	36	27	..	Foggy
„ 9	30·43	S.W.	34	34	..	36	28	..	Overcast
„ 10	29·97	S.W.	37	39	..	44	32	..	Raining
„ 11	29·95	N.E.	38	40	..	45	33	0·14	Overcast
„ 12	30·26	E.	37	39	..	48	36	..	Overcast
„ 13	29·95	S.E.	47	48	..	52	36	0·16	Overcast
„ 14	29·80	S.	49	50	..	52	45	0·36	Raining

Notes, Short Comments, and Answers to Correspondents.

DIPHTHERIA AT STAPLE-CROSS.

A CORRESPONDENT sends us the following account of a severe outbreak of diphtheria at Staple-Cross, in Sussex. The first case occurred in disagreeable connexion with a previous case. No disease of the kind had been in the neighbourhood, it is believed, for many months past. The first person attacked was a boy, four years old, reported to have been previously strong and healthy-looking. He was the only son of a widow, and lived with his mother in a comfortable cottage. No other persons occupied the cottage. Water was obtained from a spring close to the side of the road; it was loaded with vegetable matter, and contaminated by the surface drainage from the public highway. The boy when first attacked appeared to be suffering from a severe cold, contracted, as was thought, on the previous evening (Nov. 5th), after standing for some time in the wet, witnessing fireworks. He died on Nov. 12th, three days after having been visited by a medical man. The disorder then spread very rapidly, especially in the dwellings containing large families, and in one particularly, which was much overcrowded. There were about thirty cases spread over a small area, and six deaths—all of the fatal cases being of children under ten years of age. The disease was probably disseminated largely from the public school. Staple-Cross is situated on an elevated and, to all appearance, healthy site; but the hamlet has many sanitary defects, chiefly open cesspools and polluted surface wells. Topical applications to the pharynx were more trusted to by the medical man in attendance. The tincture of perchloride of iron and tincture of iodine (I.Th.B.) were used, principally the first-named tincture.

Dr. David Johnson is thanked for his communication, which will appear shortly.

A Constant Reader.—Longmans and Co., Paternoster-row.

SCHOOLS FOR IMBECILE CHILDREN.

To the Editor of THE LANCET.

SIR,—Your leading article in THE LANCET of February 9th, on the Duties of County Boards, contains a statement with reference to which I should like, with your permission, to make a few remarks.

The statement is this: "The latter (idiots) should be retained in special institutions until their dormant powers are developed, instead of being removed at the age of sixteen; when, as a matter of fact, the stage of mental growth may be correspondent to the normal age of six, and the mind, perhaps, opening with good promise when the road to improvement is suddenly stopped." Of the truth of this there is not the slightest doubt; but the inference is that all idiots *are* removed from special institutions at the age of sixteen. In none of the asylums for idiots supported by voluntary contributions is this the case, nor is it the practice at this (Clapton) idiot asylum, which I take to be the one referred to as being the only one at present under the control of the Local Government Board. The only patients who are sent out from this asylum at the age of sixteen are the "hopelessly unimprovable" ones; all others are retained. You will, I am sure, see that there can be no use in retaining cases which after many years of training do not show the slightest sign of improvement. These are removed in order to make room for more educable patients.

The Local Government Board recognises the fact that the training of idiots should not cease at the age of sixteen, and is at this moment considering plans for the erection of blocks adjacent to the school now being built at Darenth, Kent, for the training of imbecile children, this asylum not being structurally adapted for the wants of that class. In these blocks children above the age of sixteen will be placed, so that their training may not cease, but be continued as long as may be necessary.

There are many cases in this asylum in whom only slight improvement can be traced even after years of training; nevertheless, they are retained. Others again are of so low a type that no improvement whatever, even after many years' instruction, can be seen. These are, on my recommendation, discharged by the Committee to make room for others in whom some improvement may be hoped for, if not expected.

I am greatly interested in this subject, and your well known sense of justice encourages me to hope that you will allow this letter to appear in the pages of your journal.—Yours obediently,

FLETCHER BEACH, M.B., M.R.C.P.,
Feb. 11th, 1878. Medical Superintendent, Clapton Idiot Asylum.

SULPHUR FIRES IN CHOLERA EPIDEMICS.

SURGEON-MAJOR TUSON, 16th Bengal Cavalry, has frequently observed the beneficial effects of burning sulphur fires in epidemics of cholera in India, and has embodied his experience in a small pamphlet, published by Mr. Lewis, of Gower-street. The author cites instances in which the disease has apparently speedily succumbed after thorough fumigation of infected villages and streets. He lays great stress on the importance of lighting all the fires at once, and sprinkling sulphur on them simultaneously—a work that demands intelligent supervision. The piles of wood should be arranged in large heaps, so as to last several hours, and be then replenished; they should be placed at distances of forty or fifty yards around a village and through its streets, and in places where cholera has its habitat, whilst the houses should at the same time be disinfected with sulphurous acid. The fires should be kept up for forty-eight hours.

Mr. Buckle is thanked; but we do not propose to do more on the subject.

HYDROPATHY IN FLOODING.

To the Editor of THE LANCET.

SIR,—I hope Dr. Esler will pardon me if I cite the following case in proof of the proposition that from no single experiment can we deduce an absolute rule of treatment in disease.

Mrs. A—— was delivered of a live child and placenta at least two hours previous to my visit. When I saw her she was a pale, thin, anæmic woman, black-haired, with thready pulse. She was quite composed, and answered questions intelligibly. She said she was in much pain over the lower part of the abdomen. I put my hand on the latter, and searched for the uterus, but in vain. The nurse told me there was too much discharge, which I found to be the fact. I at once gave two teaspoonfuls of the liquid extract of ergot at an interval of five minutes between each spoonful; but there was no response from the womb. I then introduced my hand into the uterus, cleared out a number of clots, and gave the woman a glass of brandy. She expressed herself free from pain after this, but the uterus did not contract. Obeying the commandment of my late lamented teacher, Professor Dyce, I poured about one quart of cold water over the abdomen, the height of the douche being two feet. This made the abdominal muscles start up, emprosthotonos fashion, and, coincident with this, firm uterine contraction ensued. No hæmorrhage more than the lochia followed; in fact, there was not much blood left in my patient. Brandy and beef-tea, one ounce of the former, were given every hour for the first twenty-four hours, during which time the patient slept in wet sheets, and dried them tolerably well. She made an excellent recovery, having remained in bed for a fortnight in order to avoid a relapse. In this case I had a sponge soaked in a solution of perchloride of iron beside me as a *dernier ressort* or uterine hæmostatic; but I have strong objections to the use of this drug, unless other means for checking the hæmorrhage have been tried and have failed. I took good care to fortify my patient's constitution with a glass of brandy prior to the application of the cold-water cure. In this way I avoided the effect of what under other treatment might have proved an injurious shock. The use, and not the abuse, of shock is well seen in sea-sickness. When one is lying in the cabin in a collapsed state, a large wave breaks over the ship, and gives the passengers a cold bath. The effect is magical, causing the sick man to arise as it were from the grave.

Perhapsit is a peculiarly English way of administering brandy and cold water that which I have just narrated. In the Emerald Isle hot water seems better adapted to the Hibernian temperament. National characteristics, however, will not explain the good results under opposite treatment in Dr. Esler's and my own case. The doctor's was a "stout, adipose woman," while my patient was almost a skeleton. This difference of constitution offers one explanation of the unity of result from opposite treatment. But there is another hypothesis. Heat is also a stimulant of muscle, indirectly, as well as cold. Let anyone apply the back of a spoon that has been dipped in boiling water over his platysma myoides, or over the sole of his foot, and muscular contraction *via* the spinal cord (a tenstringed instrument) will follow. So, it appears to me, the same result will be obtained by a jet of hot water applied to the inner surface of the womb, as Dr. Esler recommends. The contraction of the uterus differs, however, from that of the action of the voluntary muscles—viz., in being continuous and permanent. How, when it is fairly aroused, much of its contraction can be ascribed to the elastic recoil after the escape of the child and liquor amnii is matter of conjecture. Nature abhors a vacuum; and if no air gets into the uterus per vaginam, the atmospheric pressure along with the binder will adjust the balance of uterine action. These ideas have occurred to me while reading Dr. Esler's valuable and instructive contribution to your columns.

Yours faithfully,
East Ilsley, Jan. 27th, 1878. R. G. M'CALMAN, M.D., C.M.

THE DEATH FROM CHLOROFORM AT LIVERPOOL.

WE are obliged for the account of this unfortunate case forwarded to us by the house-physician. Great pressure on our space compels us to defer publication until next week.

Dr. Irvine, of Glasgow, and other correspondents.—We do not think it desirable to discuss the matter further.

"THE ILLEGAL SALE OF CYANIDE OF POTASSIUM."

To the Editor of THE LANCET.

SIR,—One of your annotations of to-day (Feb. 9th) contains an error, which I think you will do me the justice of correcting. You there state the article was sold "without any entry of it in a poison book," and the fact, as remarked by Baron Huddleston, was that the Act of Parliament was complied with in every respect, with one exception—viz., that of not enforcing the attendance of a witness "*to introduce the purchaser*," a matter not always easily complied with.

Yours obediently,
GEORGE SHEPPERLEY,
Nottingham, Feb. 9th, 1878. Pharmaceutical Chemist.

SMALL-POX IN SAN FRANCISCO.

MARVELLOUSLY favoured by nature, possessing a magnificent climate, and a soil prolific to a degree, "Frisco" yet groans under a load of sanitary evils, which occasionally find expression in a virulent epidemic of one of the zymotic diseases. There is a temporary scare at the ebullition, but it is very soon succeeded by apathy; the warning conveyed is disregarded, and matters resume their old sway. The last infliction to which the inhabitants have been subjected is an outbreak of small-pox, some particulars of which by the health officer of the city, Dr. Meares, are now before us. Premising that the population of San Francisco is estimated at 300,000, we find there were reported to the Health Office 1646 cases of small-pox, of which 482 were fatal —255 in hospital, and the remainder at home, the percentage of deaths in hospital being 28·4, and in the city 29·2. Dr. Meares believes that over 300 cases were concealed by the Chinese, who form a large element of the population. The health officer does not love the "heathen Chinee," and his language regarding the same is plain and "peculiar." He "unhesitatingly declares his belief that the cause of the outbreak is the presence in our midst of 30,000 (as a class) of unscrupulous, lying, and treacherous Chinamen.... they are a social, moral, and political curse to the community," and we are bound to say Dr. Meares proves that the most flagrant violation of all sanitary laws distinguishes the Chinese quarter of San Francisco.

Dr. Blanc (Bombay) shall receive a private note.

INTERNAL URETHROTOMY.

To the Editor of THE LANCET.

SIR,—I have waited for some weeks expecting that Mr. Lund would reply to Mr. B. Hill's critique on the "Maisonneuve-Toovan" operation performed by Mr. Lund at University College Hospital (see THE LANCET for Dec. 15th, p. 904). As, however, he has not done so, I now point out the inaccuracies in that review. I would, firstly, congratulate Mr. Lund on the success of his operation; and, next, felicitate Mr. Hill on his conversion to my principle of operating—a principle, by the way, which he not long ago strongly denounced in your pages (THE LANCET, vol. i., 1874, p. 830). (1) Mr. Hill says the operation was followed by more reaction than was desirable. When we consider the extraordinary length of the incision, not less, according to Mr. Hill's measurement, than seven inches, the wonder is, not that the reaction was great, but that under such circumstances it was not greater. (2) Mr. Hill states that Maisonneuve's knife was used; it was not Maisonneuve's, but Südillot's. (3) Mr. Hill considers that a stricture ought to be cut in the floor, and not in the roof. If a surgeon wish to divide the floor rather than the roof, all he has to do is to reverse the staff of the urethrotome, as he would a lithotrite, and cut the floor, as I occasionally do, in preference to the roof. (4) Mr. Hill, when speaking of the knife, says, "This sharp edge projects for half an inch beyond the staff." This is incorrect, as it is impossible to push the knife beyond the extremity of the groove, which terminates two and a half inches from the end of the staff. (5) He regards the method of effecting the division as "cumbrous." This is a mere matter of opinion; but the broad fact remains that, in the hands of my colleagues and myself, the operation has never been followed by a fatal result.

I remain, Sir, your obedient servant,

Portman-square, Feb. 1878. W. F. TEEVAN.

Mr. A. W. W. Dowding.—Diseases of Children: Tanner. Diseases of Women: Barnes. Eye Diseases: Lawson. Therapeutics: Ringer. State Medicine: Wilson, for the Public Hygiene. Dr. de Chaumont, of Netley, has also published a useful little work on State Medicine.

Dr. Mulvey, (Detroit.)—We have no list.

PUERPERAL PYREXIA.

To the Editor of THE LANCET.

SIR,—The following notes of a case which has just been under treatment may perhaps not be uninteresting in connexion with the remarks of Dr. Glover in THE LANCET of Feb. 2nd. I may state at the outset that I think the expression "puerperal pyrexia" very happily defines the nature of the symptoms in this case, which at the time were sufficiently alarming to cause me a considerable amount of anxiety.

Mrs. P——, aged twenty-seven, a primipara, was confined after a natural labour on the morning of Jan. 12th, 1878, and up till the 16th the case went on remarkably well. The patient had a good appetite, the milk was freely secreted, and the lochial discharge had gradually declined, and was becoming pale. So satisfied was I with the progress of the case that I considered further attendance unnecessary.

On the evening of the 17th, however, I had a message to say my patient was not so well, and on my arrival found her hot and feverish, pulse 100, complaining of thirst, slight headache, but no other pain. She stated that on getting into bed that evening she felt chilly, but nothing approaching to a rigor, the secretion of milk being in no way interfered with. I did not take the temperature on this visit, and, concluding it was only a slight cold, prescribed a diaphoretic mixture.

On the 18th and 19th she continued in much the same condition, pulse 100, some thirst and headache, but no pain, nor even tenderness on pressure over any part of the abdomen, and no tympanites. On the 19th I made an evening visit, and not being satisfied at the continuance of these symptoms I took the temperature, which registered 104°; pulse 120; tongue coated; headache increased; and in addition a great reluctance to close her eyes, on account of the strange sounds and sights which she fancied she heard and saw directly she felt the least inclination to sleep; mammæ flaccid, and secretion of milk decidedly less. I prescribed a draught containing ten grains of quinine, which was to be repeated during the night if the oppressive heat of which she complained was not abated.

Jan. 20th.—9.30 A.M.: Pulse 120; temperature 103·5°. After the draught on the previous night she had a profuse perspiration, felt relieved, and slept at intervals; her condition otherwise remains unaltered, and she looks decidedly anxious. Her bowels being slightly constipated, I prescribed a mild aperient pill, to be followed by a draught of citrate of magnesia, which acted soon after, but did not materially alter her condition. On my evening visit, pulse still 120, temperature 104°, with an evident tendency to greater cerebral disturbance than had yet occurred. The secretion of milk is now almost checked, and the urine, although scanty, is free from albumen. Quinine draught to be repeated at bedtime.

21st.—9.30 A.M.: Patient had a very restless night; pulse 120; temperature 104°. To the diaphoretic mixture I now added sulphate of magnesia in half-drachm doses, to be repeated every two hours. This acted freely on the bowels, without giving rise to any irritation; but at 4 P.M. the pulse and temperature were unaltered. On calling again at 7 P.M. I found the patient had been asleep for nearly two hours, so did not disturb her. At 10 P.M. she was still sleeping; but I satisfied myself that her pulse had come down to 100, and that the temperature was apparently lower in proportion.

22nd.—9.30 A.M.: Patient slept till 11 P.M. the previous night, and awoke feeling decidedly better. This morning the pulse 96; temperature 102°. They continued to fall during the next two days, and on the 25th were both normal. The appetite gradually improved, and the patient was soon convalescent, but the milk never reappeared.

Remarks.—The striking difference in this case as compared with those of Dr. Glover's is the entire absence of pain, and presumably of either uterine or peri-uterine lesion. For this reason neither poultices nor vaginal injections were considered necessary in the treatment.

In conclusion, I think the expression "puerperal pyrexia" is decidedly more applicable to this case than to those of Dr. Glover's, since the presence of pain and abdominal distension in the latter bring them more under the category of mild puerperal fever.

I am, Sir, yours &c.,

Haltwhistle, Feb. 7th, 1878. W. R. SPEIRS, M.B.

To the Editor of THE LANCET.

SIR,—Dr. Glover's carefully—one is almost tempted to say cautiously—written "Note on Puerperal Pyrexia" is one of those additions to therapeutics which after a while, and by the test of extensive application, raise themselves into the rank of practical specifics. This opinion I base upon an experience sufficiently large, I think, to warrant my having formed one.

Mr. Whittle, in THE LANCET of Feb. 9th, ventures upon an adverse criticism of the article in question, but unfortunately quite misunderstands it. His whole letter is apparently written to prove that quinine does not produce apyrexia in puerperal fever, and that puerperal pyrexia, in many cases, gets well independently of treatment. *A propos* of this last fact, I cannot help saying "I thank goodness it is so," or the death-rate from puerperal fever in the practice of midwives would be terribly increased.

But all these cases of puerperal pyrexia do not get well; and if we are content to trust their cure to "nature's own work," as Mr. Whittle appears to be, we shall most of us, I am sadly afraid, have opportunities, like he has had, of "again and again pushing quinine to chinchonism in the worst forms of puerperal fever, and in every variety of puerperal septicæmia."

The dose of quinine in Dr. Glover's prescription—two grains every three hours—proves at once that he aims at no such thing as inducing a condition of apyrexia by the specific action of that drug. He simply claims that certain symptoms, which are very definitely and clearly set out, and which are but too often the precursors of the more formidable ones of metritis and probable pyæmia, are arrested and cured by the treatment he adopts. In my own experience this treatment has proved constant in its success.

In conclusion, allow me to point out that, although Mr. Whittle differs from Dr. Glover in the assumption of a local lesion in these cases of pyrexia, he entirely agrees with him in the value of the local remedy, even to the extent of believing "that in this direction will some day be found a remedy for puerperal fever in its worst forms, *if recognised early enough*." The symptoms enumerated in Dr. Glover's note, and the treatment he advises, comprise, I believe, the early recognition and the remedy to which Mr. Whittle's prophecy points.

Yours truly,

Barnsbury, N., Feb. 12th, 1878. THOMAS JAGO.

HEALTH OF BRITISH TROOPS ABROAD.

IT is stated that in consequence of the amount of sickness existing in the 28th Regiment at Hong-Kong, the corps has been ordered to Singapore. Looking at the climatic advantages and disadvantages of each of these places, it does appear monstrous that sick soldiers should be removed from the former to the Straits settlements. It seems like taking an invalid from Madeira and placing him in Sierra Leone. The *Daily Press* of Hong-Kong is very indignant with the authorities.

PROVIDENT DISPENSARIES.

To the Editor of THE LANCET.

SIR,—Observing a paragraph in a late number of a contemporary, setting forth the flourishing state of the Northampton Victoria Dispensary, I think that our medical brethren generally ought not to be misled in the matter. The truth is that this dispensary takes a great number of tradesmen, shopkeepers, domestic servants, and others receiving large wages, such as £2 weekly, and who certainly are not of the class to have the benefit of such institutions, but who are only too glad to have cheap medical advice; and as there are only three medical officers attached to the Victoria Dispensary, although six was the original number, and for which rule as well as that only to admit mechanics, workpeople, &c., honorary subscribers started the institution about twenty-four years since, it is considered here a very great monopoly, and is most injurious to the resident medical practitioners; in fact, ruinous to some. And so it would be in other (particularly manufacturing) places, unless all the medical men had the option of becoming medical officers.

Yours faithfully,

Northampton, Feb. 1878. M.R.C.S.

CHEAP DOCTORING.

WE regret to say that we constantly receive circulars, handbills, &c., which show a disposition on the part of some medical men to get patients at any sacrifice of their own dignity and that of the profession. Any amount of medicine and advice for a shilling, midwifery cases attended for seven shillings and sixpence, an entire absence of inquiry as to the fitness and circumstances of patients, are the features of these experiments in cheap physic, which reduce the practice of medicine to something below the calling of a chemist, and take no account of what is due to education and a learned profession. We implore gentlemen who rate their own services so lightly to consider the price of drugs and the nature of scientific knowledge, and to ask themselves what their patients must think of them and their medicines. Quack preparations will rise more and more in the estimation of the ignorant, seeing that they cost so much more than is asked for the pills and potions of men fresh from the schools.

Mr. G. Jordan Lloyd.—1. The house-surgeon can claim a fee if the death occurred before the patient reached the hospital, not otherwise.—2. The coroner can, in case of refusal, inflict a fine of £5.

A Country Practitioner.—We are unable to publish the names. A list can be obtained by any graduate.

THE UNIVERSITY OF MELBOURNE AND THE UNIVERSITY OF GLASGOW.

To the Editor of THE LANCET.

SIR,—In your note appended to the letter of a gentleman in Tasmania, which appeared in to-day's LANCET, you say that "in any amendment of the Medical Act it is probable that the holders of the best colonial degrees will be recognised."

It seems that there is no reason to thank the different colonial Governments for granting permission to the holders of British qualifications to be registered in their respective colonies without examination, the Medical Act of the Imperial Parliament empowering them to practise in all parts of Her Majesty's dominions. But before the General Medical Council introduces a clause into any amending Act which will have the effect of recognising these colonial degrees, it is well to inquire "what spirit animates the Universities granting them towards our British institutions"? I am credibly informed that the governing body (the Council) of one of them, barely emerged from its swaddling clothes—that of Melbourne,—has resolved not to admit to *ad eundem* degrees medical graduates of the University of Glasgow. I could not credit this statement till a friend showed me a colonial newspaper, called the *Australasian* (which he says has a high reputation for accuracy) of October 20th, 1877, and therein, among the answers to correspondents, it is clearly stated that the Council of the University of Melbourne has resolved to mark its sense of the *inferiority* of Glasgow degrees by *refusing* to admit those holding them to the *ad eundem* degree at Melbourne. This extraordinary proceeding led me to make some inquiries about this particular colonial University, to find out what standing it has, and who are the gentlemen constituting its medical faculty. I find that up to quite a recent period persons holding the degree of M.D. from *all* the Scotch Universities have been freely admitted to the *ad eundem* degree of Melbourne, the authorities being anxious to get a sufficient number of graduates to enable them to form what they call their Senate; but that for some time past there has been an ever-increasing jealousy of the University of Glasgow in consequence of the large number of students who, dissatisfied with the teaching of the Colonial Medical School, have come home to Glasgow, and have finished their studies and graduated there. This must be the real reason for the recent action of the Melbourne Council, for we cannot suppose its members to have been quite so ignorant as to single out Glasgow from the other Scotch Universities as being a place where medical degrees were too easily obtained. All who knew anything of the matter are aware that the very reverse is the fact, and that for some time back the regulations and examinations of that particular University have year by year been getting stricter and stricter. It is to be remembered, then, in connexion with the proposed amending Medical Act, that men taught, examined, and considered qualified in Anatomy by the European *savant*, Allen Thomson, the M.D. and LL.D. of both Edinburgh and Glasgow, the F.R.S. of both London and Edinburgh, the learned author, the late President of the British Association—men who have been taught and examined in physiology, and thought worthy to receive degrees by Andrew Buchanan or by M'Kendrick, whose names need but to be mentioned to scientific readers, are not considered good enough at Melbourne to be admitted to equal privileges with those taught and proved in *both* these subjects by a gentleman unknown beyond his own circle, except in connexion with a reputed cure for snake-bite, which finds no favour anywhere out of the colony of Victoria. The graduates who have been taught, examined, and passed by such men as Gairdner, Leishman, McCall Anderson, Lister, Macleod, Geo. Buchanan, and others, and who have also satisfied the extra-examiners who are not connected with the University as teachers, are not considered at Melbourne to be the equals of the students of a set of gentlemen who, however respectable as practitioners in their own sphere, are certainly altogether unknown beyond the small community in which they live.

Except from a generous desire to strengthen the University of the land of their adoption, I cannot conceive why graduates of Glasgow should seek for admission to *ad eundem* degrees at Melbourne, any more than I can suppose an officer already holding a commission in the Household Brigade, say in the Scots Guards, should seek one of similar rank in the Mudville Yeomanry or in the Victoria Volunteers.

Our Australian friends should remember the fable of the frog who carried his self-inflation to a fatal termination, and they may rest assured that, despite any action of theirs, the degrees of the University of Glasgow will be considered everywhere out of Victoria as much superior to those of Melbourne, as are, from a social point of view, the rank and status of a peer of the realm, of individual worth and ancient lineage, to the newly-fledged honours of the latest K.C.M.G. of an antipodean colony.

January 26th, 1878. Yours &c., SCOTSMAN.

STIMULANTS IN WORKHOUSES.

AT a meeting of the North Dublin Union guardians last week it was stated that the medical officers of the house had during the week ending the 2nd inst. prescribed 108¾ pints of whisky for the use of the inmates. Of this Dr. Kenny ordered 79¾ pints, and his two colleagues 29 pints between them. This remarkable difference attracted the notice of the guardians, who passed a resolution calling on Dr. Kenny for an explanation. We may add that in the corresponding week of last year the quantity of whisky ordered by Dr. Kirkpatrick, the predecessor of Dr. Kenny, and who, it is stated, had the same number of patients, amounted to only 4½ pints.

M.D.—The handbill in question is a very discreditable one, and the profession of the neighbourhood should intimate their displeasure at such a mode of seeking practice. The College of Surgeons should be supplied with a copy, that it may know to what modes of "getting on" some of its members betake themselves, relying on its apathy and indifference in ethical matters.

NITRITE OF AMYL IN AGUE.

To the Editor of THE LANCET.

SIR,—Of the three "picked cases" of a correspondent in your issue of Feb. 2nd, not one of them is reported as having been cured. It would add to their interest if a little more detail were observed in reporting. It is not stated what became of the patients afterwards, whether they ever again suffered from ague. In only one instance does he speak positively to there being "no relapse." Whether the others had or had not one or more relapses is not related. Neither is it mentioned whether in the whole run of cases there were any deaths referable to the treatment employed. When I spoke in THE LANCET of the 19th ult. of nitrite of amyl adding "fuel to fire," I was of course using a homely phrase. Having referred to the condition of the heart and lungs in the cold stage, what I intended to convey to your readers was that in circumstances of this nature nitrite of amyl would make matters worse for our patient, by diminishing the power of oxidation, and possibly arresting the heart of debility *in toto*.

It must not be lost sight of in this discussion, which I am now terminating, that the advocacy of the treatment of intermittents by nitrite of amyl was based on the sameness of the cold stage and the collapse of cholera (THE LANCET, Jan. 5th), and I rebutted your correspondent's "theory," or whatever he may choose to call it, or at least the notion of employing nitrite of amyl in cholera, by adducing the experience and opinion of high authority (THE LANCET, Jan. 19th, p. 112), and with it must go to the wall the corollary springing from it. Your correspondent does not seem to take into account complications often met with in ague cases. Doubtless he has sometimes found quinine disappointing; but a like misfortune will on occasions attend the use of any drug or any form of treatment. He owns to failing in a few instances, although using his favourite inhalant, attributing his failure to the health being "much undermined by repeated attacks," &c.; in fact, what I should call local complications.

Permit me, through your columns, to thank the correspondent referred to in this letter for his polite allusion to me. "Perverted" is defined by Webster and Ogilvie as "corrupted." As such language in the pages of a public journal is not permitted among gentlemen, with your permission I bid the advocate of nitrite of amyl adieu.

Your obedient servant,
Feb. 4th, 1878. H. KIERNANDER, L.R.C.S.I., &c.

To the Editor of THE LANCET.

SIR,—The profession, especially that portion resident in tropical places, owes a debt of gratitude to Mr. Saunders for bringing to its notice the value of nitrite of amyl in shivering attacks. Since his communication in the pages of the *Indian Medical Gazette* I have used it in shivering attacks, and always with benefit; but I do not agree with him when he implies that it will take the place of quinine in the treatment of ague, the result of marsh poison or the like.

Shivering attacks in India are exceedingly common. These which are not due to what is termed "malaria" are not agues in the strict sense of the word, and quinine is not their cure. Of the cause and treatment of genuine ague everyone believes himself to be a master; but of those shivering attacks which are not due to the specific cause, the cause and treatment are overlooked and unknown. Mr. Saunders unconsciously has supplied a form of treatment which is exactly what is required for this spurious form of ague, and to this form is due the good results he experienced in the use of nitrite of amyl. I cannot believe that this drug will supersede quinine in the treatment of marsh poisoning. Mr. Saunders, however, should know whether his patients were victims of malaria or not, for he was quartered where there was plenty of low-lying district or marsh land. The drug can be readily tested in England. A medical man told me not long ago that he spent £150 a year in the purchase of quinine for the cure of his ague-stricken patients in a marshy district in England. I am, therefore, quite sure that if nitrite of amyl will serve him as well as quinine now does, he will be very glad to save some portion of his present large outlay. In a short time he will, doubtless, be able to back up the opinion of Mr. Saunders.

I remain, Sir, yours truly,
Clifton, Feb. 5th, 1878. CHAS. MOORE JESSOP.

Inquirer.—The proposals do not commend themselves to us. The pecuniary terms are decidedly degrading. The chemist would get more from the public for his own medicines and advice. What is the propriety of giving thirty per cent. to the man who writes a prescription, and fifty to the man who merely dispenses it? And where is the dignity of every member of the profession in a town leaving his house for one hour to give a medical character to a chemist's shop? Another very great objection to the scheme is the entire absence of any attempt to discriminate the persons to be treated in this way. The adoption of it would make medical practice in the suburb in question a very undignified and unprofitable affair.

SMALL-POX AT KINGSTON: HOW NOT TO DO IT.

A CASE of small-pox recently occurred at Kingston. The Corporation, as sanitary authority, thereupon took the matter into consideration. As the result of their deliberation, they decided, first, that if there were any *recurrence* of the disease, it might be well to have some provision for isolation—in other words, take precautions after the mischief was done; and secondly, that the Local Government Board should be asked to give them the use of the workhouse infirmary for the proposed hospital—in other words, that the sanitary authority should be permitted to palm its cases upon the Poor-law authority, instead of taking the independent provision it is required to take.

Mr. Arthur W. Fox's (Bath) interesting case of Ulcerated Endocarditis shall appear in an early number.

Mr. Walter Pye is thanked.

MEDICAL FEES.

To the Editor of THE LANCET.

SIR,—An understanding exists amongst the leading medical men of Aberystwith that the lowest charge per visit in the town and also consultations in the house shall be five shillings, exclusive of medicine. Several of the practitioners have given up dispensing completely, and as yet have found no inconvenience from so doing, but consider it a great relief, without entailing any loss. Yours &c.,

Aberystwith, Feb. 5th, 1878. J. D. HERRIES.

Mr. Sydney Haynes did not deserve such a retort, and he must congratulate himself on not having entered into closer relations with the individual in question.

ERRATA.—In the 15th line of Dr. Dalton's letter on Hydrophobia, p. 222, in our last issue, for "often," read *after*. The date of the death of the patient was Dec. 25th, 1872, not 1873.

COMMUNICATIONS not noticed in the current number shall receive attention in our issue of the ensuing week.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Southey, London; Professor Humphry, Cambridge; Professor Henry Smith; Mr. Savory, London; Dr. Sansom, London; Mr. Erichsen, London; Dr. Gowers, London; Mr. Williams, Hull; Dr. Radford, Manchester; Dr. B. W. Richardson; Mr. Joll, London; Mr. Rundell, Sheffield; Mr. Dowdeswell, London; Dr. Fox, Bath; Dr. Bell Taylor, Nottingham; Mr. Gillingham, Chard; Dr. Beach, Clapton; Dr. Philipson, Newcastle-on-Tyne; Mr. Finemore, Hackney; Dr. Duncan, Glasgow; Mr. Murphy, Greenwich; Mr. Howard, Bound's-green; Mr. Blumer, Sunderland; Dr. A. Fraser, Aberdeen; Mr. Robertson, Buckhaven; Mr. Craigie, London; Mr. Lucas, Hammersmith; Dr. Stowers, London; Mr. Foulds, Glasgow; Dr. Waller, Peterborough; Dr. Speirs, Haltwhistle; Mr. Haynes, Stansted; Mr. Tomes, London; Mr. Saunders, Cambridge; Mr. Tallerman, London; Mr. Shepperley, Nottingham; Dr. Norton, Dorchester; Mr. Prideaux, York; Mr. Tomes, Caterham; Mr. M'Camell, Calcutta; Dr. Holmes, Meerut; Mr. Gorham, Tunbridge; Dr. Irvine, Glasgow; Mr. Buckell, Islington; Mr. Oliver, Charlton; Dr. Handfield Jones, London; Dr. Goodhart, London; Dr. P. Taylor, London; Mr. Hyde, Worcester; Dr. Dalton, Hartwith; Dr. Althaus, London; Dr. Whamond, Jarrow-on-Tyne; Dr. Smith, Kilburn; Mr. Hadden; Dr. Forsyth, Clavering; Dr. Tomkins, Manchester; Mr. Kelly; Dr. Lloyd, Birmingham; Mr. Appleyard, Bradford; Dr. Sargent; Mr. Gordon; Messrs. Moore and Co., New York; Mr. Hickson; Messrs. Sutton and Sons, Reading; Dr. Messenger, Guisborough; Mr. Wallace; Dr. Sentinon, Barcelona; Mr. Evans, Aberavon; Dr. Lloyd, Hackney; Mr. Graham, Air; Mr. Bradshaw; Dr. B. H. Jones, Liverpool; Dr. Johnston, Kensington; Dr. Aldridge; Mr. Hebb; Mr. Twining; Dr. Tatham; Mr. Holt; Dr. Roche, Devonport; Mr. Heisch; Dr. Jago; Mr. Ingpen; Mr. Foster; Mr. W. Pye; Dr. Sheen, Cardiff; Dr. C. Fox; Mr. Dowding, Ampthill; Student; The Military Secretary, India Office; Royal Institution; A Subscriber; The Registrar-General of Births &c.; Craven; Sigma; A Surgeon; W. N.; M.R.C.S.; Inquirens; Verax; A Country Practitioner; S. H.; A. B. C.; Pathological Society; House-Surgeon; B. W. N.; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Aspinall, Darwen; Mr. Osborne, Nesfield; Mr. Bullivant, Derby; Mr. Davies, Bryngolwg; Mr. Frost, Stoke-on-Trent; Dr. Josieu, Pau; Dr. Cooke, Sheffield; Mr. Johnson, Sedgley; Mr. B. Smith, Brighton; Dr. Bowen, Preston; Dr. Muscroft, Pontefract; Mr. Schacht, Clifton; Mr. Lacey, Plumstead; Dr. Hackney, Warbleton; Mr. Holmes; Mr. Stephenson; Mr. Hine, Ilminster; Dr. Cunningham, Oldham; Mr. Dean, Wolverhampton; Mr. Evans; Dr. Collins; Mr. Sharpey; Dr. Diver, Kenley; Dr. Tibbits, Bradford; Mr. Lawton; Messrs. Hartill, Willenhall; Mr. Fuge; Mr. Oldham; Mr. Salter; Dr. Foote, Rotherham; Mr. Johnston, Glasgow; Mr. Morris; Mr. Leaver; Dr. Heginbothom, Bruton; Dr. Lightbourne, Preston; P. J., Bournemouth; J., Oldham; Y. Z.; A. C. S., Swinton; M., Enfield; Kappa; A. B.; Alpha, Manchester; Epsilon; A. E. J.; M.D., Grantham; A. K. B.; H. W. C., Great Yarmouth; Surgeon, North Shields; Waverley.

Leeds Mercury, Hornet, Warminster Herald, Hand and Heart, Glasgow Herald, Belfast Morning News, Temperance Record, Madras Mail, Gardeners' Magazine, Hong-Kong Daily Press, British Architect, Sanitary Register, Woman's Gazette, Liverpool Mercury, Leicester Weekly Press, Sussex Daily News, Guy's Hospital Gazette, Bournemouth Visitors' Directory, &c., have been received.

Medical Diary for the ensuing Week.

Monday, Feb. 18.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
ST. MARK'S HOSPITAL.—Operations, 9 A.M. and 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
LONDON HOSPITAL.—Operations, 1½ P.M.; on Wednesday, 2 P.M.; on Thursday, 1½ P.M.; and on Saturday, 2½ P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor Parker, "On the Morphology of the Batrachia."
MEDICAL SOCIETY OF LONDON.—8½ P.M. Mr. Balmanno Squire, "On two Cases of Flat Vascular Nævus successfully treated by repeated Linear Scarification."—Mr. Wm. Adams will exhibit improved Instruments for the treatment of Broken Nose; and Mr. Spencer Watson, improved Instruments for the treatment of Distortion of the Nose.—Mr. Wordsworth, "On the Treatment of Squinting without Operation."

Tuesday, Feb. 19.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
ROYAL INSTITUTION.—3 P.M. Professor Garrod, "On the Protoplasmic Theory of Life, and its bearing on Physiology."
PATHOLOGICAL SOCIETY OF LONDON.—8½ P.M. The following Specimens will be shown:—Tumours of both Ovaries; Cysts from the Peritoneum; Cystic Disease of the Thyroid; Malformation of the Heart; Thrombosis of the Vena Cava, with Secondary Thrombosis of the Portal Vein; Aneurism of the Right Auricle; Melanotic Liver; Dilatation of the Aorta from old Spinal Disease; A Case of general Arterial Disease; Worms in the Heart, Liver, and Larynx of a Dog; A rare form of Psoriasis (drawing); A Case of Nævus complicated with Molluscum (drawing); Case of Hypertrophic Lupus; Renal Calculus containing Indigo; Renal Calculus of mixed Carbonate and Phosphate; Spontaneous Disintegration of Calculi; and other Specimens.

Wednesday, Feb. 20.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1 P.M.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor Parker, "On the Morphology of the Batrachia."
ASSOCIATION OF SURGEONS PRACTISING DENTAL SURGERY.—8½ P.M. Mr. Lyons: "Observations on the Treatment of Compound Fractures of the Lower Jaw, with Notes of Cases."

Thursday, Feb. 21.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
ROYAL INSTITUTION.—3 P.M. Professor Dewar, "On the Chemistry of the Organic World."
HARVEIAN SOCIETY.—8 P.M. Dr. de G. Griffith: "A Case of Hydramnios." Mr. K. Thornton, "On Unsuccessful Ovariotomy, with Cases."

Friday, Feb. 22.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor Parker, "On the Morphology of the Batrachia."
ROYAL INSTITUTION.—8 P.M. Weekly Meeting.—9 P.M. Professor Odling, "On the New Metal Gallium."
QUEKETT MICROSCOPICAL CLUB.—8 P.M. Ordinary Meeting.

Saturday, Feb. 23.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Mr. R. Bosworth Smith, "On Carthage and the Carthaginians."

NOTICE.

In consequence of THE LANCET being frequently detained by the Post Office when posted for places abroad *more than eight days after* publication, subscribers and others are reminded that such copies can be forwarded only as book packets, and *prepaid* as such.

TERMS FOR ADVERTISING IN THE LANCET.

For 7 lines and under....	£0	4	6	For half a page	£2	12	3
For every additional line.	0	0	6	For a page	5	0	0

The average number of words in a line is eleven.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

N.B.—All letters relating to Subscriptions or Advertisements should be addressed to the Publisher.

Agent for the Advertising Department in France—
Mons. DE LOMINIE, 208, Rue Grenelle St. Germain, Paris.